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# *Street Transportation*

## IMPROVING ITS MANAGEMENT IN SAN FRANCISCO

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# Street Transportation

## IMPROVING ITS MANAGEMENT IN SAN FRANCISCO

*Prepared For The*

BOARD OF SUPERVISORS

City and County of San Francisco, California

*by the*

Automotive Safety Foundation

Washington, D. C.

1957

## CITY AND COUNTY OF SAN FRANCISCO, CALIFORNIA

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Invaluable assistance in the completion of this study given to the Advisory Committee and the Study Staff by the following officials and others is gratefully acknowledged: Captains Otto Meyer and Daniel McKlem who preceded Captain Kiely as Police Department representative on the Advisory Committee; Assistant City Attorney Bernard M. Ward; Donald O. Townsend, Chief, Department of Electricity; Charles D. Miller, Manager, Municipal Railway, and B. A. Devine, Manager, Bureau of Light, Heat and Power; Reuben H. Owens, City Engineer, and Ross T. Shoaf, Traffic Engineer; Bryant Hall and J. R. McCarthy, Associate Planners; Thomas J. O'Toole, Secretary to the Parking Authority; Edwin S. Moore, General Manager, California State Automobile Association.

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Automotive Safety Foundation

DEDICATED TO EDUCATION AND RESEARCH FOR SAFE, EFFICIENT HIGHWAY TRANSPORTATION

200 RING BUILDING
WASHINGTON 6, D.C.

January 7, 1957

The Honorable The Board of Supervisors
City and County of San Francisco
City Hall
San Francisco, California

Gentlemen:

Upon the invitation of the Mayor, and pursuant to Ordinance No. 9357, which recognized the need "of crystallizing a definitive and expeditious street traffic management program for San Francisco," the report entitled "Street Transportation" is herewith submitted.

Objective of the study was to review present responsibilities of the various city departments in street and traffic management, determine the functions which make up this important municipal activity, and devise means for efficient consolidation of the essential functions.

The legal analysis, based upon charter and ordinance sections submitted by the City Attorney's office, has been separately published. Grateful acknowledgment is made to City Attorney Dion R. Holm for the cooperation and assistance which assured accuracy and completeness of this analysis.

The review of present activities was based upon detailed reports submitted by all affected city and county departments. The concurrence of the heads and staffs of these departments in the preliminary findings was invaluable to the progress of the work.

The report on legal responsibilities, as well as this document, was edited and published by the Publications Division of the Foundation, which also developed the historical and economic background material.

The counsel and support of the Traffic Advisory Committee, officially created by the ordinance, has been of material aid to the study staff. This group was established "to promote general interest and participation in, and acceptance of, the Foundation studies and recommendations."

The study could not have been successfully concluded without the enthusiastic cooperation of Mayor George Christopher; Mr. John J. Ferdon, President of the Board of Supervisors; Mr. Thomas A. Brooks, Chief Administrative Officer; and Mr. Philip F. Landis, Chairman of the Traffic Advisory Committee.

San Francisco has competent officials and technicians to carry forward an aggressive street transportation program. Given adequate authority, under a more efficiently organized administrative structure, they will do a progressively better job in providing street transportation improvements.

Respectfully,

D. Grant Mickle

*Director*
Traffic Engineering Division

3 1223 05881 1986

# Contents


ACKNOWLEDGEMENTS ..... 3

THIS STUDY, NEED AND SCOPE ..... 7

TRANSPORTATION, BIG BUSINESS ..... 9

BASIC MANAGEMENT FUNCTIONS ..... 12

FUNCTIONS AS NOW PERFORMED ..... 19

THE NEED FOR REORGANIZATION ..... 29

THE RECOMMENDED REORGANIZATION ..... 33

ADDITIONAL PROPOSALS ..... 43

STEPS TO TAKE ..... 45

APPENDIX ..... 47

PHOTO CREDITS ..... 50

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https://archive.org/details/streettransporta1957auto

# This Study, Need and Scope

THAT San Francisco has a traffic problem is known to everyone who uses the city's streets, whether as a motorist, transit rider, operator of a commercial vehicle or pedestrian.

The symptoms of the problem include congestion, lack of parking and truck loading facilities, and a needlessly high accident rate. *The consequences are tremendous losses in time, money, life and limb.*

Traffic moves at a snail's pace in the central business district during most of the day and snarls up in many other parts of the city during peak travel hours. Cars circle for blocks before finding parking, and trucks often must double park to make pick-ups and deliveries. Scarcely a month goes by in San Francisco without more than 1,000 traffic accidents and five or six deaths.

Although these evidences of the traffic problem are clear, the underlying causes are not as readily apparent. One factor is inadequate physical facilities for the movement of persons and goods; i.e., the street and highway plant. Others have studied San Francisco's need for additional transportation facilities and have submitted recommendations for improvements. That subject is outside the scope of this study.

*But the traffic problem does not stem from lack of physical facilities alone. Good management, too, is essential. The community can get full value from its large investment in roads and streets only if they are efficiently designed, built and operated.*

The responsibilities for provision of traffic facilities and their management in San Francisco (with the exception of certain highways under the jurisdiction of the State of California) are assigned by law to various agencies of city government. Unless these agencies have clear-cut responsibilities, so organized that their functions can be carried out expeditiously, they cannot give the public the service it expects and to which it is entitled. The degree to which they are hampered by deficiencies in the laws or in the administrative structure under which they operate will determine the extent to which their operating efficiency is reduced and the public service impaired accordingly.

The rapid growth of street transportation, especially during the past quarter century, did not permit San Francisco to set up an integrated management structure. Like other cities, it was compelled to adopt expedients to meet urgent traffic problems as they arose. In each case, a new responsibility was assigned to whatever agency of government seemed to be in the best position at the time to handle it. Functions usually had to be grouped by the skills involved, without consideration of the total management job or the interrelationship of previously assigned responsibilities. The result was a widespread and complex dispersion of administrative responsibilities.

*Such a cumbersome and outmoded management structure obviously is a severe handicap to city officials. Simple but important traffic operational functions, for example, which should be performed in a matter of days — or even hours — require as much as half a year. The delays and inefficiency which are inherent in such a system impose a costly and unnecessary burden on the entire community.*

The traffic management structure is determined, first of all, by laws. Duties are defined and assigned by the State — through the constitution and legislative enactments — and by the City Charter, ordinances and resolutions. Court interpretations of these laws further demarcate what is permissible and what is prohibited.

Consequently, the first phase of this study was a complete and detailed analysis of legal responsibilities. It was the first time in San Francisco that all the laws relating to the street management function of city-county government had been brought together and reviewed. Findings have been published separately.*

---

* *"Legal Responsibilities for Street and Traffic Management in San Francisco."*

The study disclosed that the job had been parceled out over the years to 18 different agencies by a bewildering assortment of charter amendments, ordinances, resolutions and state laws. The basic charter itself dates back to 1932, nearly a quarter century ago.

A second phase of the study has been to analyze the management structure, as revealed by the analysis of existing law, to determine whether it meets accepted standards of efficient public administration.

Four principles recognized as basic for good government organization were applied as follows:

**1. The organization of government should achieve the maximum integration of related functions.**

**2. The position of each division within the government structure should be based primarily on the importance of its functions.**

**3. Each major department should have the clearly assigned authority required for the discharge of its responsibilities without the need for specific clearance of individual actions.**

**4. A clear distinction should be maintained between administrative and policy decisions, and each should be executed at its proper level.**

Where it has been found that existing administrative structure and operating procedures fail to conform substantially with these principles, reorganization has been recommended.

Succeeding chapters of the report discuss the economic importance of efficient street transportation management; describe the seven basic functions of government in this field; examine the existing administrative pattern in San Francisco, in relation to these functions, and make specific recommendations for needed reorganization.

A final section outlines the steps necessary to carry out the proposed reorganization in an orderly and efficient manner. The required charter revisions are listed in detail in the appendix.

**Congestion, particularly during peak hours, is evident in many parts of San Francisco.**

**Frequent accidents are another indicator of the seriousness of a city's traffic crisis.**

# Transportation, Big Business

EVERY San Franciscan has his own ideas how his city can improve its traffic flow. Suggestions range from construction of a subway network for transit to prohibition of private vehicles in the central business district.

Leaving aside the merits of these many suggestions, the fact that they are voiced at every opportunity shows a healthy community interest in this major present-day problem. The importance of transportation in general and street traffic in particular, merits this active interest. *The economy of few United States cities is more closely geared to transportation than that of San Francisco. This has been true throughout the city's history.*

First as a port and then also as a terminus of the Pony Express, stage lines, railroads, bus lines and now both domestic and overseas air lines, San Francisco has been and is the transportation hub of the Pacific Coast. Its position as a major distributing center for goods from and to all parts of the world rests on transportation.

The city is served by four class I railroads, eleven passenger and two freight air lines, three transcontinental and numerous local bus lines, nearly 100 common carrier truck lines, plus many contract and private carriers. There were more than 9,000 ship arrivals and departures at Bay ports in 1955.

As an industry in its own right, transportation accounts for a sizable portion of San Francisco's total employment and payroll. A report of the California Trucking Associations, Inc., shows that truck transportation provides jobs for nearly 30,000 persons at an annual payroll of more than $120 million. Water transportation, rail, air, public transport are also large-scale employers, as are such businesses as automotive retailing, the operation of service and repair stations and the manufacture of transportation equipment.

In common with all cities, San Francisco depends increasingly on rubber-tired transportation for the conduct of its daily business. At the dawn of the automotive age a half century ago the vehicle was largely the creature of the sports enthusiast. As late as the 1920's the automobile still could, with a large measure of accuracy, be called the "pleasure car." This is no longer true. Today four out of every five trips are connected with earning a living, or shopping, or both. Only one is for social, religious, educational or recreational purposes.

All of the 2.5 million passengers who departed from or arrived at San Francisco airport during 1955, for example, either began or completed their trips by automotive transportation. Port officials report that more than 70 per cent of all cargo moving to and from shipside was carried by truck. Manufacturing, construction, wholesaling and retailing and the service trades all depend upon day-to-day use of automotive transportation.

Because the rubber-tired vehicle has become economically so important, we have witnessed a tremendous growth of vehicle ownership and use. In San Francisco in 1914 there were 12,000 automotive vehicles registered or 35 vehicles for every mile of improved streets. Today there are 320 vehicles per mile of improved streets.

*Mr. and Mrs. San Francisco currently spend about 10 per cent of their annual family budget for transportation, more than for any other budget item save food and housing.* In the case of salaried employees, transportation costs the family 11.1 per cent of the annual cash outlay. For families of wage workers, the cost of transportation represents 9.3 per cent of the year's expense.

The resident who owns an average passenger vehicle has an investment in it of $800, when allowance is made for depreciation. He spends on an average of $1,045 a year to operate his vehicle based on cost figures compiled for the American Automobile Association. This expenditure excludes $50 and $100 deductible insurance.

San Franciscans collectively have more than $200 million invested in private passenger vehicles and spend more than $250 million a year for vehicle operation.

**Most of San Francisco's ocean-borne cargo is moved to and from shipside via trucks.**

For the city as a whole, the daily movement of people is a tremendous business. The City Planning Commission estimates that there are currently 1.5 million daily trip destinations.

A study by the research department of the San Francisco Chamber of Commerce showed that in 1954 there were 580,484 daily (24 hour) passenger movements in and out of San Francisco, of which 84.8 per cent were by private vehicle. The same study showed 272,499 vehicles a day, entering or leaving.

Street transportation represents a tremendous capital investment in San Francisco, meriting the most efficient management possible. The value of trucks currently in use is more than $42 million. *The road and street plant, including right of way, has a replacement value of $568 million.* The municipally owned transit system has a net book value of $17 million.

The importance of good management is indicated also by the need for greater efficiency and safety in the traffic stream. Congestion and accidents are levying huge economic penalties against the community.

One measure of transportation efficiency is travel time. On rural roads in the United States, for example, the average speed of automobile travel has doubled during the past three decades — from 26 to 52 miles per hour.

In urban areas, however, there has been no such increase. On the contrary, in many instances speeds are slower, travel time greater. Despite improvements in vehicle performance and the many engineering measures taken by the city to relieve congestion, San Francisco has just been able to hold its own in vehicle travel time during the past 20 years.

Travel is faster today on some routes than in 1937. This has been achieved by the removal of street car tracks, bans on curb parking, establishment of tow-away zones, improvements in traffic signalization and other measures. But travel times have increased on other routes, testifying to the fact that much still remains to be accomplished.

Because of terrain features of San Francisco, it is impossible to assign clear values to the several factors that contribute to traffic delay. On certain routes, operators of heavy vehicles report that grades slow travel considerably. Truckers on other routes blame congestion for the slower speeds.

In either case, delay costs money. For example, the California Utilities Commission considers elapsed time needed to make deliveries in computing haulage charges. Thus traffic delays are reflected in higher freight rates, which consumers ultimately pay.

Another example of the cost of traffic congestion is the "delay time" charged cab riders. When traffic delay time was added as a meter charge in San Francisco in 1948 on the basis of 10 cents for every 2½ minutes, official sources placed the added cost to local cab riders at $127,000 a year. Since then, although the volume of cab riding has declined, the portion of the city's cab bill chargeable to traffic congestion has increased to $275,000. That is the added cost for 728 licensed cabs, only a tiny fraction of the fleet of cars, trucks and buses using San Francisco streets.

Another measure of the efficiency of traffic operation is the safety record. San Francisco currently is reporting about 17,000 accidents a year, including five or six fatalities each month.

*Traffic accidents at current rates cost the people of San Francisco, based on National Safety Council cost formulae, around $11 million a year. The seriousness of this problem warrants the establishment by the city of the most efficient traffic management service possible.*

Losses of life, property, time and money are direct and measurable. Inefficient street transportation also inflicts other less tangible but nevertheless very important economic losses on the community. Traffic conditions, for example, materially affect the desirability of a city as a place to live. They are a factor in industrial growth. Adequate planning and management of the street transportation facilities are fundamental to nearly every aspect of the city's progress and development.

The economic importance of efficient traffic movement is further enhanced by consideration of future city growth. Of particular interest is the projected increase in vehicle registration in relation to population.

It is estimated that by 1970 the population of San Francisco will increase to 875,000, a relatively slower rate of growth than that predicted for other sections of the Bay area owing to the limits on available land within the city proper. Vehicle registrations are expected to reach 320,000 in the city and 1.5 million in the Bay area as a whole. The vehicle population of the entire Bay area will be a factor in San Francisco's future traffic problem because the city is expected to continue as the core of the area's commercial and financial activity.

San Francisco has mapped extensive programs of freeway construction, street modernization, track removal, street widening, improvements in traffic signals and street lighting, and in the provision of additional off-street parking facilities. These programs involve substantial capital outlays and further underscore the need to plan, build and operate these facilities with an optimum level of efficiency.

During the next 12 years the nation will be engaged in an unprecedented highway improvement program. A large part of the construction will be in urban areas and San Francisco will share proportionately in this program. This will involve close working relationships between the Federal Government and the state and city agencies concerned with highways. *Establishment of an efficient street transportation agency within the city is essential to effective conduct of these inter-governmental relations.*

The efficiency of many municipal services depends in part on the free and orderly flow of traffic. Police and fire protection and sanitation are examples.

A parallel can be drawn between the handling of fire protection and the management of street and traffic affairs. It was the need for improved fire protection which first brought about the paving of streets in San Francisco more than a century ago, after fire fighting apparatus had bogged down repeatedly in a series of fires that plagued the city during its early history.

**Of the persons who enter or leave the City daily, more than four out of five go by car.**

Subsequent experience has made San Francisco fire conscious and appreciative of the need for good protective services in a single department that ranks high in the structure of city government. It enjoys the advantages that stem from consolidated administration and a level in the governmental structure appropriate to the importance of its job.

Because of the good organization of its fire protective services, San Francisco ranks among the best cities in the country. It has a Class II rating for purposes of setting insurance premiums. This good rating brings a premium savings estimated at $3 million a year, measured against a comparable dollar value of insurance in a city rated Class III.

A traffic-conscious community, handling its growing street transportation problems on a comparable basis, can expect similar economic benefits.

# Basic Management Functions

MODERN street and traffic management embraces seven principal functions: Planning, Design, Construction, Operations, Public Transportation, Maintenance and Inventories and Records. Each involves separate and specific responsibilities, which are described in this chapter.

## PLANNING

Street and traffic planning is the collection and analysis of facts to develop a coordinated program of action.

Because street transportation is dynamic and ever-changing, planning cannot be properly carried on if assigned to various scattered operating agencies as a by-product of their other activities. Neither can it be achieved by intermittent efforts of temporary personnel, nor by occasional outside consultants. It's a continuing job.

*The first requisite of planning is data collection to determine needs for transportation service and whether existing facilities are providing and can provide this service.*

A traffic origin and destination study, as was conducted in San Francisco in 1946-47, is essential in determining travel desires. Surveys of this magnitude cannot be undertaken often. To keep data current, changes in modes and patterns of travel, population movements and vehicle registrations must constantly be reviewed.

Measures of a street system's ability to give adequate service include travel time studies, parking inventories, capacity investigations, traffic volume and accident studies. There also must be examination of the condition of such structural aspects of the street system as pavement, bridges, culverts and drainage structures.

Physical improvements deteriorate, travel patterns change, as do the standards of service expected by the public. Anticipation of these changes is essential to transportation planning; as time passes, additional facilities will become obsolete. Planning includes provision for such future obsolescence. This requires a continuous program of measurements to predict both service and physical life of the various facilities.

The collection and analysis of current as well as historical data permit translation of long-range objectives into a master street plan. This plan must be fluid to reflect new needs as they arise. It must consider the present and future service requirements of all street users — pedestrians and transit riders as well as motorists and vehicle operators.

Because the long-range plan looks many years ahead, there must also be an *intermediate plan,* keyed to availability of funds and the priority rating of the various elements of the master street plan as well as minor betterments and maintenance activity necessary to make the best use of existing facilities. Intermediate planning is another important management responsibility that requires a fund of basic data.

*Another vital element of planning is coordination of the daily activities of the various agencies dealing with street traffic.* Design, maintenance and operations activities must be harmonized to contribute toward the long-range planning objectives. Such integration requires careful administrative control.

Street and traffic planning also must be coordinated with broad city planning and the transportation planning of other governmental agencies.

San Francisco, which is the hub of the entire Bay area, must closely coordinate its transportation plan with those of agencies such as the Toll Bridge Authority, adjacent counties, and the California Division of Highways.

## DESIGN

Once facilities are planned they must be designed before they can be built. The designer gives physical dimensions to the plan. In doing that he must consider and provide for secondary and subsidiary uses of the facility as well as primary ones.

Primarily a street provides communication between points. Today motorized transportation dominates this communication, and vehicular traffic is properly considered the principal element in street use. Design, however, must provide for other street uses including utilities such as telephone, water and sewer; pedestrian and other non-motorized traffic; provision of light, air and access to abutting properties and consideration of aesthetic qualities.

Among the subsidiary features, provision must be made for drainage, cleaning, lighting, lateral support, curbs and other delineations, traffic controls and a myriad of other details.

## General Standards

Proper design necessitates a set of general standards. Such standards must reflect the varying service requirements of different classes of facilities such as freeways, major arterials, local industrial, business and residential streets.

General standards should specify, for each class of street, the maximum and minimum permissible grade, slope and curvature, sight distance, lane widths, sidewalks and margins, load carrying ability and required materials and methods. Drains, curbs, lighting, driveways and other subsidiary elements also must be specified.

Standards must be reviewed periodically to keep them realistic and effective in light of current and future needs.

## Design Criteria

An important phase of design is application of general standards for that class of facility to individual projects. Only in that way will the finished facility provide the service intended. For example, width of improvements, sidewalk widths, control point elevations and right of way widths establish the service characteristics of a street. *These design criteria require the specialized knowledge of technical personnel for their determination.*

The same is true for other areas of street and traffic design, such as selection and spacing of luminaires in street lighting, selection of the type of traffic signals, and selection of type and capacity of off-street parking facilities.

## Construction Plans

Design also must develop detailed specifications and plans from which the final construction or installation will take place. This detailed design on new construction may be done by agencies outside city government. For smaller, specialized projects this phase is usually undertaken by municipal forces.

**Sound transportation planning requires that a great deal of basic data be collected. One of the most important types of surveys is an origin and destination study to learn travel desires.**

**Any major project, such as the removal of street car tracks, must be planned well in advance of the start of construction work.**

### Checking and Approving

Finally, design includes checking and approving construction plans. Where the same organization has done the detailed design, final checking can be carried out almost simultaneously. Designs by other than the approving agency require thorough scrutiny before approval to assure that all design criteria have been met.

## CONSTRUCTION

Construction gives physical reality to plans and designs and is closely related to design. Unforeseen developments during construction may require minor design changes.

Construction work in the street area obviously must be coordinated with the traffic operations function since it often affects the flow of traffic. The forthcoming accelerated street and highway improvement program increases the importance of such coordination.

The $2,000 charter limitation on force account work in San Francisco requires that all but the smallest construction projects be contracted. The city's responsibility is primarily one of testing, inspecting and approving this work.

## OPERATIONS

Traffic operations — the operation and control of the use of the street system — is the function closest to the street user, and hence is the one by which he is most apt to judge the city's entire street and traffic program.

*The objective of traffic operations is to make the best use of all streets by regulation of the streams of vehicles and pedestrians using them.* It also must regulate other uses of street space affecting traffic movement. Such uses include on-and-off-street parking, truck and bus loading, street storage of materials and street excavations for sub-surface utilities, driveways, sidewalk stands, poles, posts and other objects occupying the street area. In addition, the operation of special elements in the traffic stream such as over-dimensional vehicles and loads must be controlled as must such events as parades and street meetings which preempt use of the entire street area.

All these street uses must be synchronized as the same limited area accommodates them.

### Traffic Control

Foremost in traffic operations are engineering measures and devices — signs, signals and markings. Criteria in the form of warrants are necessary in the use of control devices. These warrants, based upon engineering investigations, assure a consistency in placing controls and a maximum benefit from their use.

Design must provide for traffic control devices and it cannot go forward successfully until questions of allowable speed, turning movements, type of traffic and parking are decided.

With proper coordination of planning, design and operations, control devices will be installed before accidents and congestion demonstrate that they are needed at particular locations. This is most important.

### Traffic Studies

Functioning of the street system requires continual study to assure that existing facilities are producing maximum service. This requires observations as extensive as the planning studies previously de-

scribed, although aimed at a different purpose. Speeds and traffic volumes must be checked periodically to assure that controls are effective; accident records must be carefully scrutinized to detect hazardous locations; observations of street parking practices must be made to verify that regulations of parking are producing maximum utilization; intersectional delays must be measured during peak and slack traffic periods to determine proper signal timing.

*These regular observations, augmented by reports from the public and other municipal agencies, measure the pulse of the city's traffic arteries.* When these measurements reveal a problem, further engineering study is required to determine proper action.

## Curb Parking

Control of curb parking is important to optimum use of the street area. Where traffic movement does not require the entire street width, often the various parking and loading elements compete for the remaining space. Bus and truck loading curb space is needed to prevent interference to moving traffic. Passenger loading, short term parking, taxi stands and other special uses must also be considered. Equitable allocation of available space requires complete knowledge of the traffic, parking and loading demands at the specific location.

## Permits

Traffic operations also includes control over non-traffic uses of the street area. This control is exercised primarily through permits. Proper discharge of the function calls for basic criteria for allowable specific private uses.

Poles, hydrants, newsstands, and other sidewalk furniture should be located so as not to interfere with the free use of the sidewalk by pedestrians. Likewise, whether to permit temporary storage of construction supplies or equipment on the street depends on traffic requirements. Pavement openings for utility repairs or the use of street areas for railroad spur tracks must be carefully regulated to protect the predominant public use of the street by pedestrian and vehicle traffic. Parades and street assemblages should not interfere unreasonably with essential street use.

## Control of Fringe Interference

Control is also required over access to streets from abutting private property. The size and location of necessary commercial and private driveways must be specified to protect street traffic from undue interference. A similar problem surrounds location and operation of off-street parking facilities. All too often such facilities, to suit their internal convenience, are allowed to interfere seriously with vehicles and pedestrians using the public street. *Governmental control should insure that the public interest in the street system is not infringed, and that private developments along the street margin do not place impossible burdens upon the system.*

These many, divergent and competing elements of street use must be harmoniously reconciled, since each, in its proper place, serves the public interest.

## Routing

Finally, within the scope of traffic operations is the routing of special traffic movements. The ability of the selected streets to serve such special traffic movements merits careful study. Frequently temporary detours require minor structural changes in the streets, such as increased curb radius to facilitate turns. For permanent routings the type and condition of the street pavement, as well as grades, turn radii and the general operational characteristics of the street must be considered. In either case, extensive changes in the over-all traffic control system are often necessary.

Civil Defense problems including evacuation of civilian populations in case of disaster or enemy attack concern large cities of this country. The traffic operations agency should help prepare for these contingencies.

**Public interest in the street system must be protected by control over access to it.**

## PUBLIC TRANSPORTATION

The end objective in street and traffic management is the safe, convenient and expeditious movement of people and goods. Whether such movement takes place on foot, in for-hire vehicles, by private automobile or by mass transit vehicles, it is a municipal responsibility to see that the transportation system is satisfactorily meeting its ultimate obligation.

The requirement for transportation service from a specific area is measured in terms of persons and individual trip desires. The number of trip desires to be accommodated by private vehicles, by pedestrian movement and by public carriers will largely determine the need for streets and highways. The provision of parking facilities obviously must be based upon the same knowledge since only the private vehicle presents a parking demand.

In deciding on his mode of travel, each person is guided by a complicated comparison of the relative convenience, prestige, travel time, and cost of the alternatives. Any change in the total attractiveness of one mode will inevitably affect all others. The provision of more or less expensive parking, as an example, will inevitably alter the number of persons using buses and private cars. The provision of a new transportation facility, or changes in street environment, similarly affects this balance.

*Sound policies respecting public transportation must recognize this interrelationship among all elements of the city's street transportation program.*

**Maintenance, such as street cleaning, is an important function in street transportation.**

A major function of traffic management, therefore, is competent, long-range planning which fully develops all pertinent data on which public transportation policies should be based.

A second function is regulatory; i.e., the granting of permits to operate, and the establishment of rules for the use of city streets by publicly and privately owned vehicles. This phase of city administration, to be efficient, must be closely coordinated with traffic operations, and also with the management of transit facilities.

## MAINTENANCE

The objective of maintenance is to keep the various components of the street system in serviceable condition. Maintenance includes inspection and repair to combat the effects of normal wear, weather and accidental damage. It also includes continuing activities such as tending draw bridges or winding parking meters. Cleaning is a major element of maintenance. For San Francisco's 800 miles of paved streets, street cleaning alone costs $1,640,000 a year.

### Inspection

Inspection of the street system and its appurtenances is an important part of the maintenance program. Prompt reporting of deficiencies — and their repair — can effect substantial economies. In the case of sidewalks, responsibility for maintenance rests upon abutting property owners. Through properly organized inspection, the city is able to enforce its obligation to compel adequate maintenance.

In San Francisco, the maintenance of street lights and traffic signs, and other maintenance projects in excess of $2,000, are delegated to contractors. The city, however, must inspect and supervise this work.

### Routine Maintenance

The city's street plant is so vast that day-to-day maintenance by municipal forces is a big job. Included are minor repairs to street surfaces, curbs, staircases, structures; shop and field maintenance of mechanical and electrical devices such as traffic signals, tunnel ventilation, etc.; installation, repair and rehabilitation of traffic markings and street signs; the care and maintenance of street plantings; and cleaning streets and sidewalks.

More than one-half billion dollars is invested in the street plant. A lackadaisical or inept maintenance policy could cost the city millions of dollars per year in unnecessary deterioration.

# INVENTORIES AND RECORDS

A city's investment in its street system compares to the investment of a large corporation in its plants. Each must maintain a detailed inventory of its property. In addition, many aspects of street and traffic management legally affect the actions of local citizens and, as such, must be made a matter of official public record.

Most important is the official street map, and corollary records, showing the exact position, width, alignment and grade of the street right of way. Records must be maintained of the improvements occupying this street area, both improvements to the streets themselves and the sizeable investment in sub-surface and other utilities.

## Surveys

The first requisite of an adequate system of maps and records is a precise land survey. This may employ both conventional survey methods and photogrammetry. This survey is closely related to design and construction operations. Both depend upon an accurate determination of the location, elevation and description of parcels of land upon which street and traffic facilities are built. Surveys must be made of new additions to the street plant. Improvements must be checked to insure that they conform to prescribed grade and alignment.

Establishment of benchmarks and monuments is a continuing task. The network of survey lines and records is the basis of the land measurements which describe and define all property holdings, public and private, within the city. They must be recorded for this reason alone, even if no future street construction were contemplated.

## Maps

These surveys produce the multitude of maps and drawings which are basic tools in all phases of street and traffic management. Maps of large areas must be prepared for street planning. Pre-design drawings must show ground elevations, property lines, location of existing structures, etc. Other maps are required to record inventory information of all types.

## Inventory

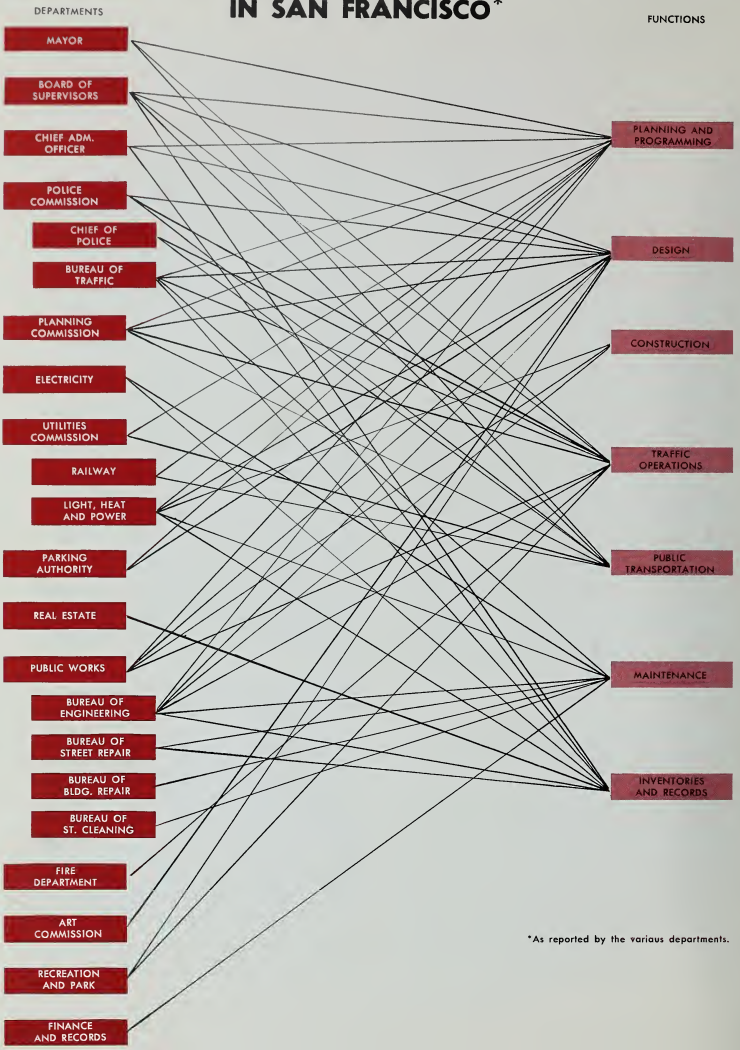
The inventory of all aspects of the street system is equally important. A continuous record must be maintained of street pavement types, improvement widths, the existence of curbs, sidewalks, lighting installations, utilities, etc.

**Surveys are basic to all projects for the improvement of the City's street system.**

The existence, type and operation of various traffic control devices and markings must be permanently recorded. All of these items are basic to planning and programming future development. To obtain maximum utility from these records, to make possible the effective use of modern business techniques, and to give this important task proper emphasis, it should be assigned to an adequately equipped, centralized agency.

The basic information for this continuous inventory comes from the operating agencies. This must be augmented, however, by regular field observations to assure that accidental or outside causes have not brought about unrecorded changes.

# DISPERSION OF STREET TRANSPORTATION FUNCTIONS IN SAN FRANCISCO*




*As reported by the various departments.

# Functions As Now Performed

THE following analysis of the existing street transportation management structure in San Francisco was made on the basis of the legal survey; from information provided by the officials in charge of the municipal agencies involved, whose cooperation was invaluable, and from field observations and interviews conducted during the past year.

The various responsibilities of governmental agencies are related in each case to the seven basic functions of traffic management as described in the previous chapter.

## PLANNING

At present in San Francisco transportation planning is not an integrated function. Instead 11 agencies of government share responsibility for various elements of planning.

The City Planning Commission, charged as it is with preparing the broad, over-all plan for the city's development, has established a basic set of long-range street transportation objectives. *The Planning Commission, however, is neither staffed nor responsible for continuous collection and analysis of data essential for an up-to-date, comprehensive street and traffic plan.*

Because responsibility in street and traffic affairs is dispersed, a committee was established shortly after World War II to develop a coordinated transportation plan. Represented on this committee were the Planning Commission, Department of Public Works, Department of Public Utilities and the Police Department. These departments lacked means to undertake a full-scale planning operation. Thus, in 1947, two consulting firms were hired to collect and analyze the necessary field data and to develop a master transportation plan. This is desirable and often necessary in initiating a planning program. *However, a plan so developed is inherently static and unless kept current, soon is outdated and loses the confidence of the agencies charged with financing and carrying it out.* Such appears to be the case in San Francisco.

Street transportation must fit into the broad plan. This is the proper function of the Planning Commission. But to expect the Commission to orient individual segments of the street transportation plan into a cohesive whole is as unrealistic as to expect it to develop detailed plans for fire protection or water supply, or any major municipal service.

### Data Collection

Data collection is now dispersed among the operating agencies. The Police Department collects and maintains records on traffic accident frequency as an aid to enforcement. These are used, to an extent, in planning and developing priorities for street lighting and control devices. The police also collect certain traffic volume and parking information, primarily for use in specific operational problems.

The Traffic Bureau of the Police Department is responsible for traffic research and traffic planning, including data collection. However, its function has been one of cooperation rather than direct action.

Most street and traffic data have been collected by the Bureau of Engineering in the Department of Public Works. The emphasis has been on day-to-day operational needs. However, information has been collected to update certain portions of the 1948 comprehensive survey, particularly data needed to determine feasibility of proposed off-street parking structures. Inventories and data on the physical condition of the street system are maintained by the Bureau of Engineering, and to some extent, by the Bureau of Street Repair.

### Intermediate Planning

The master trafficways plan, resulting from the 1948 consultants' report, falls primarily to the Department of Public Works and the State Division of

**Coordination of the State freeway program with other street work does credit to all.**

Highways for execution. Both agencies have been closely guided in their subsequent actions by this plan. *The coordination of the State freeway program with the city's street and traffic improvements does credit to all agencies concerned.*

The Parking Authority was formed in 1949 and made responsible for developing plans and programs for off-street parking. However, without staff adequate to keep data current and to develop an intermediate program, the parking phases of the transportation plan of 1948 soon became obsolete. Since off-street parking is vital to street transportation, its provision must be closely related to other elements of the plan. This, unfortunately, has not been the case. Present off-street parking plans cover only the immediate objectives of the next few years. There are no specific plans to provide parking for the increased traffic to be brought into the city by the proposed Southern Crossing, Western Freeway or other street transportation improvements.

Street lighting, a municipal service essential to safe and efficient street use, is administered under the Public Utilities Commission by the Bureau of Light, Heat and Power. A six-year plan for improving street lighting in the city was formulated in 1945, but less than 30 per cent of it has been accomplished to date.

### Establishing Planning Policy

The Mayor and Board of Supervisors, as the principal policy makers of city government, have important functions in planning. They appraise programs developed by subordinate agencies and relate them to over-all city needs and abilities. They must establish broad policy as to timing and methods of financing major projects and the relative importance of programs with widely divergent objectives — public health, industrial development, etc.

These policy decisions fall properly to the Mayor and Board of Supervisors. On the other hand, the Mayor and Board of Supervisors now are burdened with technical details of planning and determining factually the costs and benefits of specific projects prior to the adoption of a "Resolution of Necessity" for street improvement projects or the designation of sites for off-street parking facilities. *With this detail work assigned to the Mayor and Board of Supervisors, rather than to technicians of the city's staff, important policy decisions may be confused by minor side issues.*

## PROBLEMS CREATED BY DISPERSION

Without unified planning, such coordination as has been achieved has come about by informal agreement rather than careful study. The Bureau of Light, Heat and Power, Parking Authority, Department of Public Works and Police Department each has formulated its own intermediate plans for matters under its jurisdiction. *Consequently the Mayor and Board of Supervisors have been forced to decide priorities among the competing elements without full information.*

The city's street lighting program offers an example of the results. Planning and programming of street lighting improvements is done by the Public Utilities Commission rather than a coordinated street and traffic agency. Although the officers who prepare the street lighting program realize the interrelationships between lighting and other traffic improvements, present organization requires these to be considered separately. Street lighting projects are, therefore, presented to the top city administration, Mayor and Board of Supervisors, as an isolated program, unrelated either to the city's over-all street and traffic improvement program, or to the program of self-liquidating utility improvements with which it is grouped.

It is not surprising, then, that with over half of the city's street lighting units obsolete, funds for

improving lighting are drastically cut in the annual budgeting procedure. The Mayor and Supervisors can hardly be expected to envision and evaluate the interrelated benefits of projects so presented.

Ironically, one of the relatively few lighting improvement projects to receive funds in recent years, 3rd Street from the channel to Alameda Street, must await programming of the street widening project for this same area by the Department of Public Works. *Dispersion of authority has hampered coordinated intermediate planning, and has placed technical planning decisions unnecessarily on the city's top policy officers.*

Many other examples could be cited of the results of this dispersed responsibility. The master trafficways plan, for instance, adopted in 1951 and amended in 1955, calls for two east-west secondary thoroughfares through the Sunset District, Noriega Street and Taraval Street. Stop signs and other control devices should normally be employed to encourage use of these streets as secondary arterials.

In the case of Noriega Street, a series of four-way stops at every third intersection makes the street almost entirely unsuitable for such use and encourages use of adjacent streets.

A proposed north-south secondary thoroughfare, 28th Avenue, lacks any special protection to make it more suitable for arterial use. *Patently the immediate activities of the operating departments don't mesh closely with the planning function in today's organization of government in San Francisco.* Transportation planning cannot be effective under these conditions.

# DESIGN

Ten agencies currently operate in the sphere of street and traffic design in San Francisco.

Since the Board of Supervisors holds power to purchase and hold title to land in the name of the city, it passes on all items related to location, right of way width and alignment. In this process detailed street project designs are often reviewed by the Board.

The Board of Supervisors by official action also establishes basic design criteria for street grades, improvement width and sidewalk widths. This forces the Board to review and act upon every construction or betterment project regardless of size. In view of the planning and budgetary controls exercised by the Supervisors, this requirement adds needlessly to their work load and inevitably complicates and delays worthwhile projects.

## Checking and Approval

As now interpreted, the City Charter requires that all designs affecting the visible dimensions of a street, or eliminating or altering a traffic movement be approved by the Police Commission and the Traffic Bureau. These agencies also review and approve detailed design of all traffic signal installations, painting and channelization projects.

The Planning Commission's role in design is also primarily one of review and approval. It reviews plats of new subdivisions, showing the grade, width and alignment of roadways. It checks plans for major projects, such as freeways. The Planning Commission has a proper interest in the location and general design of trafficways, which affect the master plan and other elements of the city's development. This interest has, in the past, been extended to include reviewing design items such as the grade and alignment of freeway ramps, width of roadways, etc.

## Detailed Design

The Bureau of Engineering of the Department of Public Works develops most detailed plans for street and traffic improvements, although increasing reliance has been placed upon contracted design work. Its Division of Streets and Highways establishes tentative design criteria, performs detail design and checks and approves designs of street improvements made by outside agencies. These actions are, however, subject to final approval by the Director of

**In San Francisco, ten agencies now divide up responsibilities of the design function.**

Public Works, Chief Administrative Officer, Board of Supervisors (and the Police Commission and California Division of Highways in most cases).

The Bureau's Division of Design does detailed design work on structures, traffic control signals, and some street lighting installations. Design criteria for traffic control signals and, in some cases, channelization and special lighting projects, are set by the Traffic Engineering Division. It also checks and approves detailed designs as does the Police Commission and Traffic Bureau. All street lighting projects are checked and approved by the Bureau of Light, Heat and Power of the Public Utilities Commission. This Bureau also designs lighting projects not directly connected with structural street improvements.

To date, detailed design work for off-street parking structures has been performed by the lessee rather than the city. Here the design function has been largely checking and approval of plans by the Parking Authority, with assistance from the City Engineer and Traffic Engineer.

*The growth of automobile use and the inadequacies of the street system have turned many park roads into arterial streets. Main Drive through Golden Gate Park, as an example, carries approximately 15,000 vehicles a day.* These roads are maintained, for the most part, by the Department of Public Works with funds derived from gasoline taxes. Designs for betterments or new construction on these roads are drawn by the Department of Public Works, subject to approval by the Recreation and Park Commission.

**Many of the roadways through San Francisco parks have become major traffic arteries.**

The Art Commission is the final city agency having a jurisdiction over street and highway design. The charter provides that this Commission shall approve bridges, viaducts, and other structures and may advise regarding lines and grades of public ways. Thus, all street improvement projects which include new structures fall within its jurisdiction and require its approval.

## DISPERSAL DELAYS PROGRESS

The large number of municipal agencies having a voice in street and traffic design naturally delays improvements. *The power to act is negative rather than positive. Many agencies can veto or delay a project, but none can materially expedite a project.* With authority spread and each agency judging plans against its own criteria, it has been impossible to establish general standards for evaluating designs. Each project must be resolved in a separate conference, often by compromise. For example, installation of the modern traffic signal system in the Mission District was delayed over 18 months before the concerned agencies reached agreement. The original cost estimate was exceeded by $150,000 because of the final compromises. Numerous worthwhile projects have been completely defeated by this cumbersome process and countless manhours have been wasted in repeated reviews.

In years past, this elaborate and wasteful procedure designed to give "everyone his say" may not have been disastrous. In the next 15 years, however, over $250,000,000 in new street and highway construction will be spent by city and state agencies to eliminate existing deficiencies. This program cannot produce the traffic relief the people of San Francisco expect, if design and approval powers of the city remain dispersed as at present. In dealings with the state and other outside agencies, the present temporizing measures of "coordinating committees" weaken the city's position.

The difficulty in reaching agreement on the alignment of the Embarcadero Freeway, which has been the subject of much comment in the public press of San Francisco, is another example of the delay produced by dispersal of responsibility in design.

## CONSTRUCTION

Street and traffic construction activity in San Francisco is better integrated than other aspects of street management. As noted earlier, the $2,000 charter limitation on force account work which exists in San Francisco results in all but the smallest construction projects being performed by contractors.

The Bureau of Engineering of the Department of Public Works is responsible for all street construction projects except street lighting. When street lighting projects are part of a street improvement, these also are under the jurisdiction of the Bureau of Engineering. The Construction Division of the Bureau, in addition to inspectional staff, contains the materials testing laboratory necessary to satisfactory control of construction materials. The coordination between design and construction has generally been favorable, particularly in street construction projects dominated by the Department of Public Works. In construction projects wherein the Department of Public Works, Police Department and Department of Electricity have equal interest, problems have naturally resulted. *In these cases, inspection of the completed work has often been triplicated and even then, maintenance crews occasionally have been assigned to immediately make changes in the accepted work.*

Traffic operations during periods and in locations where construction work has been going on has suffered from the lack of coordination among the several agencies having responsibilities in this area. Changes in the methods of traffic handling during street construction projects have not always benefited the motoring public.

**Construction is a well integrated function, with major work being done under contract.**

## TRAFFIC OPERATIONS

The traffic operations function in San Francisco is characterized by a failure to maintain a clear distinction between administration and policy-making.

Activity of the Board of Supervisors in the field of traffic operations is extensive. The profusion of traffic operations matters coming before that body has produced striking inconsistencies in the way various responsibilities are discharged.

In general, all enforceable traffic and parking controls are authorized by resolutions of the Board of Supervisors, as are closings of streets to any traffic use. This includes one-way regulations, stop signs, parking time limits, turn prohibitions, etc. All such resolutions require the signature of the Mayor to be effective. However, whereas stop signs require individual authorization by resolution, traffic signals do not. Parking limits, including meter time limits, are designated by Board resolution. These may be removed or omitted at the discretion of subordinate agencies. In addition, parking prohibitions indicated by curb markings, rather than signs, and all special use curb zones, such as taxi or loading zones, are installed without Board of Supervisors' action. Stop signs, installed by resolution of the Board of Supervisors, may be removed and replaced by less stringent control without specific Board action. *Thus the many resolutions dealing with specific locations may or may not accurately reflect the existing situation. This system also imposes considerable needless work on the Board of Supervisors and the Mayor.*

The Police Commission has the primary responsibility in traffic control matters. It acts on all requests for added, deleted, or modified traffic and parking controls. Since the Police Commission is a lay body meeting infrequently, the Police Traffic Bureau investigates each request and reports to it with recommendations. These recommendations, if approved, become resolutions of the Police Commission. In instances requiring Board of Supervisors' action, such resolutions are forwarded to its

**Control of parking in any block may require action by as many as three city agencies.**

Police Committee. The Police Commission has final authority over all parking and no parking zones designated by paint markings, except bus zones and taxi zones, installation of parking meters within designated time limit areas, and traffic signal installation. In these matters, the Police Commission resolution goes to the Traffic Bureau for the detailed processing required to install the devices or markings.

The Police Commission also reviews and approves plans for new traffic signal installations, including their timing and operational pattern, lane line and center line marking plans, and detour or other routing plans submitted by other agencies.

The Chief of Police establishes vehicle-for-hire stands, rather than the Police Commission. *Thus, the parking regulations in a single block may depend legally upon official action of three different city agencies.* The Chief of Police also authorizes parades and designates their routes.

The Traffic Bureau, besides reporting on all requests for traffic controls, has several other traffic operations functions. It decides the type, size and location of traffic signs or curb markings required under regulations established by the Board of Supervisors, Police Commission, or Chief of Police. Warning and directional signs not requiring specific authorization are also under its jurisdiction.

The Traffic Bureau investigates and changes traffic signal timing to fit changing traffic patterns. It plans the handling of special event traffic, including temporary parking or traffic controls required.

The Traffic Bureau keeps traffic accident reports and analyzes this information to discover and eliminate hazards. The Bureau also makes some traffic volume and parking studies in specific hazardous or congested locations.

The Department of Public Works has almost exclusive regulation of subsidiary street uses. This Department issues permits for location of poles, hydrants, driveways, material storage and other obstructions, spur tracks and facilities placed under streets or sidewalks. It also issues permits for moving buildings and other over-dimensional loads over streets. The Permit Bureau and the Bureau of Engineering of that Department make the investigations and inspections necessary for these permits.

The Bureau of Engineering, through its Traffic Engineering Division, is also active in traffic control. This Division budgets all funds for traffic control installations. It establishes warrants and priorities for traffic signal installations which are, in a sense, negative, since they apply only to locations designated by the Police Commission. This Division does the functional design and initial timing of traffic signal installations. It programs and supervises pavement markings and street name sign installations.

The Traffic Engineering Division conducts engineering studies required by state law prior to Board of Supervisors' action in altering speed limits. It also conducts traffic volume, delay and speed studies when specific problems require, and either makes changes or requests the Traffic Bureau to do so.

This Division plans detour routings, required by street construction, subject to approval by the Police Commission.

*The Fire Department also has traffic operations functions. It approves permits for street excavations, storage, building and over-dimensional load moving. It also routes trucks transporting flammable liquids. Routing of other trucks of similar size and operating characteristics falls to the Police Commission and Board of Supervisors.*

The Fire Department licenses the location and operation of off-street parking facilities. This is the only municipal control, other than general zoning laws, over such facilities. Prevention of fire loss is scarcely the dominant municipal interest in the location and operation of off-street parking facilities.

Traffic operations on roadways within city parks is controlled exclusively by the Recreation and Park Commission. This includes the selection of all traffic control measures and complete authority to limit, restrict or prohibit the use of park roads. This is much greater authority than has been delegated in any other phase of street and traffic management. In view of the arterial nature of many park roads,

this introduces an additional major agency into San Francisco's complicated administration of traffic operations.

In total, 11 city agencies handle traffic operations in San Francisco. In addition, the State Division of Highways prescribes standards and specifications for street and highway signs installed within municipalities. The state reviews and approves any traffic operational project (such as traffic signals) utilizing gasoline tax funds. Other state agencies, such as the Toll Bridge Authority and State Harbor Commission, control traffic operations within their jurisdictions.

## CONFUSION, DELAY AND INEFFICIENCY

Occupation of the same field by 11 city agencies produces inevitable confusion and duplication. As noted elsewhere, the greatest fault of this multiple jurisdiction is the inordinate time required to get things done. As an example, the simple installation of a stop sign averages six months from original request to final accomplishment. The following typical example comes from official records and reports of the various departments concerned:

**TYPICAL TIME SCHEDULE**

| *Action* | *Date Completed* | *Time Required To Complete* |
|---|---|---|
| Police receive request for investigation | 3/19 | |
| Received by Traffic Bureau from Chief's Office | 3/26 | 1 wk. |
| Report prepared by Traffic Bureau | 4/5 | 1½ wks. |
| Approved by Police Commission | 4/23 | 2½ wks. |
| Approved by Police Committee | 6/12 | 7 wks. |
| Approved by Board of Supervisors | 6/19 | 1 wk. |
| Signed by Mayor | 6/26 | 1 wk. |
| Sign location selected and sign ordered | 7/30 | 5 wks. |
| Public Works processes list and Purchase Order is issued | 8/20 | 3 wks. |
| California Automobile Association installs sign | 9/10 | 3 wks. |
| | | 25 wks. |

**A simple operation such as erection of a stop sign can require as much as 25 weeks.**

Were authority and responsibilities properly assigned, such a project could be accomplished within one week.

*Well-conceived, consistent warrants for establishment of control devices are impossible under the present organization.* The use of stop signs, without specific warrants, has varied from indiscriminate use to parsimony, as commissions and committees have been reconstituted. Such a positive control of vehicular movement can be changed only with attendant hazards. The system of stop sign and other major traffic controls within the city reflects the inconsistent policy. A two-way stop in the center of an otherwise signalized area, as at the intersection of Powell and O'Farrell Streets, is an example. Less than 10 per cent of San Francisco streets have full arterial street protection, in contrast with 25 to 30 per cent in comparable cities.

The over-all program of traffic observations to detect developing weaknesses in the street system has been neglected. *The National Safety Council analysis of the traffic engineering performance in San Francisco indicates a 50 per cent deficiency in manhours devoted to this important job.* As a result, accident and congestion problems are often not detected until citizen complaints alert official attention.

**Work in the street area can affect traffic operations materially, including transit.**

## PUBLIC TRANSPORTATION

The Municipal Railway, a department of the Public Utilities Commission, is the principal public transportation carrier in San Francisco. The Municipal Railway operates its thousand vehicle fleet more than 28 million miles annually, providing, exclusively, the city's intra-urban transit service. This agency also makes all routing plans and schedules, maintains its equipment and the sizable plant necessary to such an operation.

Most proposals for adding, curtailing or abandoning service are reviewed by the Public Utilities Commission before being carried out. The Board of Supervisors, and the Mayor must act on any proposal which involves abandonment of service.

Control over other transportation media, taxicabs, jitney buses, and interurban buses is by the Chief of Police. He has jurisdiction over the routes, stops and stands for these vehicles. The Police Commission, however, issues the basic "Certificate of Public Convenience and Necessity" which is tantamount to a franchise for intra-urban vehicles. This control omits those vehicles engaged in inter-city transportation under the authority of the state Railroad Commission.

The Board of Supervisors has also, by ordinance, established areas of the city from which interurban passenger buses are excluded.

## MAINTENANCE

Four bureaus of the Department of Public Works are actively engaged in street and traffic maintenance.

The Bureau of Engineering inspects the physical condition of streets, sidewalks and street structures. It enforces the adequate maintenance of sidewalks and programs the maintenance of streets and structures done under contract. For contract work this Bureau draws plans and specifications, supervises the letting of the contract and inspects and accepts the finished job. The Bureau of Engineering, through its Traffic Engineering Division, supervises maintenance of street name signs, bus zones, and pavement markings and budgets for maintenance of all traffic control devices.

The Bureau of Street Repair performs the routine maintenance and repair of streets, pedestrian stairways and other facilities, curbs, gutters and, in some cases, sidewalks. This Bureau provides maintenance personnel for city drawbridges and tunnels. It also maintains the trees and other plantings in the street area. The distinction between the street maintenance responsibilities of the Bureaus of Engineering and Street Repair is not clear although the latter is restricted, in general, to projects costing less than $2,000.

The Bureau of Building Repair supplies manpower and materials to install and maintain curb and street markings. *With supervision of these two items split between the Bureau of Engineering and the Traffic Bureau, separate crews are required for each.* Building Repair also maintains the street name signs in the city and some traffic and parking control signs, such as bus zone signs, not maintained by the California Automobile Association. When sidewalk maintenance is to be charged to the abutting property owner, this Bureau does the work.

The Bureau of Street Cleaning flushes and sweeps city streets and sidewalks; removes weeds and debris from boulevards, easements and vacant city property; cleans tunnels and maintains litter receptacles.

The Traffic Bureau of the Police Department maintains traffic signs and curb markings through inspection and general supervision of the efforts of other agencies. Traffic sign maintenance is provided, under contract, by the California Automobile Association. That organization does some inspecting but most is by the Police Department augmented by incidental efforts of other city agencies such as the Municipal Railway. *At present, less than one per cent of the city's traffic signs are replaced or rehabilitated annually. This rate does not compensate for normal deterioration.*

Curb markings are installed and maintained by the Building Repair Division of the Department of Public Works under the direct supervision of the Traffic Bureau.

The Bureau of Light, Heat and Power of the Public Utilities Commission maintains the street lighting system. This function also has been delegated to a contractor with the Bureau maintaining only general supervisory powers.

The Department of Electricity maintains parking meters and traffic signals. Since some supervision over these functions is exercised by both the Traffic Bureau and the Bureau of Engineering, the maintenance of these devices is a triumvirate; policy control by the Traffic Bureau and the Police Commission, budgetary control by the Traffic Engineering Division of the Bureau of Engineering and actual procedural supervision by the Department of Electricity.

In 1956, the Police Commission initiated a change in regulations covering parking meter operations on holidays. Consequently the Bureau of Electricity had to change the instruction plates on over 13,000 parking meters. The Bureau of Engineering had to provide $20,000 which had not been anticipated or budgeted for this large scale revision.

## DUPLICATION OF CREWS REQUIRED

Street maintenance responsibilities have been placed largely according to the skills involved. For example, the Bureau of Building Repair does street painting since it employs painters extensively in building maintenance. Budgetary controls, however, prevent painters paid from one fund from being employed on other work. In addition, dispersed supervisory control requires assignment of separate and independent crews to pavement painting on one hand and curb painting on the other. In other cases, inflexible budget controls have required duplication of crews performing identical tasks.

Street Repair crews are assigned to sidewalk maintenance where gas tax funds are employed. Identical maintenance to be assessed against the abutting property, however, is performed by a separate crew from the Building Repair Division.

The antiquated limitation of $2000 on any project performed by municipal forces has further complicated efficient maintenance. Street lighting maintenance is contracted because it exceeds the limitation. Specialized equipment and, to an extent, night crews, are needed to handle emergency situations. The city, of course, must pay for this service as part of the contract fee. On the other hand, traffic signal maintenance is performed by municipal forces having equipment and skills comparable to those of the street lighting contractor. An emergency crew services signal malfunctions during evening and night hours. *Certainly, these two closely related operations could be efficiently combined.* Much the same situation exists in street pavement maintenance. The low expense limitation does not allow the city to efficiently utilize its equipment and skilled personnel.

*The greatest source of maintenance inefficiency, however, stems from dispersed authority over various segments of the operation.*

A simple revision of traffic controls such as the channelization project at Kezar Drive and Lincoln Way (pictured) exemplifies the present inefficiency. Raised asphalt bars were used to delineate the left turn. Street Repair crews installed them. Building Repair crews painted them and altered markings. Additional painting required to prohibit parking along a critical curve was done by a separate crew

**It required work by four separate crews to change the simple traffic controls pictured.**

**The keeping of inventories and records is essential in any well conducted business and street transportation is big business in San Francisco. Responsibilities for this function are dispersed.**

from the Building Repair Division under different supervision. Finally, crews of the California Automobile Association altered signs and delineators. Four separate work crews went to the location for this work. Had the street lighting been altered, another crew would have been involved; street name signs, another; traffic signals, another; parking meters, still another. The work of each of these crews must be programmed, supervised and inspected. Clearly, a vast amount of effort is duplicated.

## INVENTORIES AND RECORDS

The responsibility for maps and records, like others in San Francisco, has been dispersed among several agencies. Certain basic records are entombed in the ordinances and resolutions of the Board of Supervisors. These, however, are almost always duplicated in the files of the affected departments.

Records of land ownership are kept by the Department of Real Estate. Street grades and widths are recorded in the Department of Public Works by the Division of Surveys and Mapping of the Bureau of Engineering. This division also surveys land for the city and keeps records of it. Records of utilities located in the right of way are in the Design Division and records of street improvement in the Division of Streets and Highways. The Bureau of Street Repair keeps further records of street pavements and repair work accomplished. The Division of Traffic Engineering maintains records of the various traffic control devices and markings such as traffic signal location and timing, stop sign location, pavement markings, etc. The Traffic Bureau of the Police Department records location of signals, traffic signs and markings. A third set of traffic sign locations is maintained by the California Automobile Association. An additional record of traffic signal locations and timing is kept by the Department of Electricity. Maps, drawings and other street lighting records are maintained by the Bureau of Light, Heat and Power of the Public Utilities Commission.

*In any business, adequate records are essential. Street and traffic management in San Francisco is a big business.* California state law requires cities and counties to maintain complete street records and report thereon annually. The scattering of this record keeping function among a multitude of agencies leads to costly duplication and inefficiencies.

# The Need For Reorganization

RESPONSIBILITY for street and traffic management in San Francisco is shared by the Mayor, Board of Supervisors, five Commissions, six Bureaus, five Departments, one Authority, the Chief Administrative Officer and the Chief of Police. Thus, at least 66 executives act in a variety of official capacities in this single field. It is a tribute to the caliber of these men that anything constructive has been possible under such conditions. A reorganization to eliminate duplications, overlappings and divisions of authority will significantly increase their ability to meet the city's transportation obligations.

Consolidation of the functions of street transportation management into a new department will bring a number of distinct advantages:

**1. A department with a clearly defined single purpose which will have a position in the government structure consistent with the importance of its responsibilities.**

**2. A single officer accountable to the Board of Supervisors and Mayor for all city street transportation affairs, replacing an unmanageable hodge-podge of officers and agencies.**

**3. A single, cohesive policy for efficient solution of transportation problems by both private and public carriers.**

**4. A positive approach to street transportation problems rather than the negative one now exemplified by the widespread veto powers held by isolated agencies.**

**5. Elimination of costly duplications in handling street transportation matters.**

**6. Marked reduction in the time required to complete needed street transportation improvements.**

**7. A stronger voice for the City in transportation projects administered by State and Federal agencies and a position of leadership in metropolitan area transportation matters.**

**8. More efficient use of engineering and technical personnel through elimination of duplication of effort. This is particularly important in view of the present national shortage of technicians.**

These are vital community objectives in the motor age. Such a reorganization, to be successful, must create distinct spheres of jurisdiction with related functions consolidated, and no overlapping or fuzzy "no man's lands." Each agency must have authority sufficient to effectively discharge its obligations with a minimum of "clearances" or "authorizations." This must be achieved without adversely affecting the other divisions of government having important related functions.

The Mayor and Board of Supervisors are ultimately responsible for all actions of the city-county government. Their responsibility must be bulwarked with sufficient controls over actions of subordinate agencies to insure compliance with prescribed policies. *None of the recommendations which follow seeks to establish an autonomous body or a body in any way empowered to make policy decisions as distinct from administrative decisions. Establishment of general policy in this and every other field of city activity is the prerogative of the Board of Supervisors and Mayor elected by the people to perform that function.*

Street and traffic management is neither independent nor self-sufficient. To provide an efficient transportation system, it must work cooperatively with other municipal departments such as the Planning Commission, the Public Utilities Commission, the Courts and the Police Department. The police patrol the street system and enforce traffic regulations. Their work is essential to the ultimate success of the street engineering program. The efforts of the police, in turn, depend on an adequate court system for thorough effectiveness. Likewise, proper engineering will help enforcement both by police and courts. Close coordination between these divi-

sions, each working within its own distinct area of activity, is mandatory.

The role of the Planning Commission in street and traffic management has been described previously. The transportation system is the skeleton supporting all city development. Transportation affects and is affected by changes in the physical structure of the city. These changes must be orderly and the Planning Commission must see that they are. It must have the assistance of the street transportation agency to be successful. Street and traffic plans must be developed cooperatively.

The street transportation agency, as a department of city government, will require the services of many other departments: Civil Service, Finance, City Attorney and Purchaser, to name but a few. Thus, as street and traffic management functions are consolidated, this department becomes but one cog in the over-all municipal organization.

## PUBLIC TRANSPORTATION PROBLEMS

In considering the proposed reorganization, it is desirable to maintain a clear distinction between those portions of the public transportation function which come within the realm of street and traffic management and those which relate solely to the business of operating a transportation utility. In the case of the former, they have been placed under the proposed new department. *In the case of the latter, there appears to be no advantage to the city in separating the operation of the Municipal Railway from the Public Utilities Commission.* This arises from the fact that, unlike other municipal traffic activities, the Municipal Railway is, in form, a utility. Its problems of rates and fares, customer relations, equipment maintenance and labor relations are not unlike those of a private company or the other utilities administered by the Commission.

The planning and regulatory functions in public transportation, however, are closely and directly associated with other responsibilities of municipal government in street traffic management. Their efficient performance requires full administrative integration with other activities of the street transportation agency.

It is especially important that effective planning be undertaken to provide the foundation for a progressive and realistic public transportation policy in San Francisco. This city was among the first in the country to decide that provision of internal mass transportation was a public obligation. Efficient public management and integration of competing lines into the system have, however, failed to

**Public transportation and freeways are mutually dependent in meeting the transportation demand of the city. An integrated plan is essential to future adequacy of both elements.**

stem a decrease in patronage. Each year the decrease in revenues has been greater than the operating efficiencies achieved by management. The deficit continues to grow. Standards of service, particularly during peak hours, have continued to decline.

It has been suggested that a solution to the mass transportation problem lies in larger vehicles — rapid transit trains — on an exclusive right of way, subway or elevated. Others maintain that the initial cost of such a system is prohibitive and that it could not render a door-to-door service comparable, in travel time and cost, to the private automobile. A fixed-rail, rapid-transit system, they assert, depends upon the very high population densities found in Eastern cities to permit frequent, non-stop service from residential areas to the central city. This type of development does not exist in the San Francisco area.

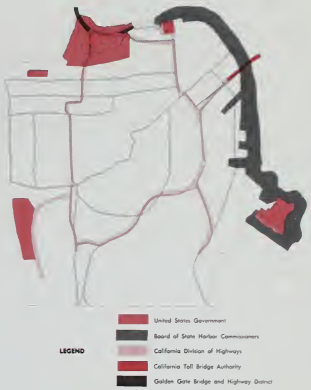
Diametrically opposite to the rail rapid-transit advocates are those who contend that smaller vehicles utilizing the proposed freeway system should be the public carriers of the future. Such a system would involve a much lower investment. The small, free-wheeled vehicle could leave the freeway and give personalized, frequent-stop service without sacrificing over-all travel time. Such a system, a fusion of taxicab, bus and jitney, would, however, entail higher labor costs and new labor relations problems.

Between these two extremes lie other possible solutions — transit rail lines on freeway rights of way; exclusive transit lanes on freeways or surface streets; streets reserved entirely for transit use; fringe parking lots served by freeways from residential areas and transit from the central area. The possibility of entirely new forms of urban transit — moving belts or "piggy back" combinations of free-wheeled and rail vehicles — has been suggested.

The solution may well depend upon the changes which are taking place in the country's economy. Economists predict that the six-hour work day will be common within a generation. Will this mean two shifts per day in downtown stores and offices? If so, the influence upon the hourly distribution of travel will be profound. The ratio of peak-hour to off-peak demand, which is a basic cause of transit's present financial problem, would be completely altered.

Certainly it is imperative that all possibilities and trends be thoroughly explored, in the light of San Francisco's total transportation needs for the future, and also in relation to the city's plans for the development of its street system. *Public transit is essential to the community, and its problems deserve the kind of full-scale coordinated planning which the establishment of a Street Transportation Department would make possible.*

**STATE-FEDERAL AGENCIES WITH STREET AND TRAFFIC AUTHORITY IN SAN FRANCISCO**




**Activities of all government agencies that control transportation must be coordinated.**

## INTER-GOVERNMENTAL COORDINATION

Finally, in connection with the proposed reorganization, there remains the coordination of effort between the city-county and other governmental agencies active in this field. The authority of these agencies is largely based in state law and so unaffected by any possible municipal reorganization. The city's position in dealing effectively with these agencies, however, would be immeasurably improved by putting its own house in order. With the absence of a multitude of voices attempting to speak for the city, effective inter-governmental coordination becomes much more readily attainable. The city will also be in a position to accept its proper role of leadership in solving street transportation problems of a regional nature.

# DEPARTMENT OF STREET TRANSPORTATION

# The Recommended Reorganization

It is recommended that there be created within the government of the City and County of San Francisco a Department of Street Transportation, headed by a Director appointed by and reporting to the Chief Administrative Officer.

The Department would occupy in the municipal administration a position at the same level as existing major departments — Public Works, Health, Police, etc. — and the Director would have status equal to the heads of those agencies.

The duties and responsibilities of the Department of Street Transportation would be as follows:

**1. To conduct traffic studies and research required to plan for and provide efficient, safe and convenient street transportation for San Francisco.**

**2. To devise and keep current a long range street transportation plan and its components (off-street parking, freeways and major streets, public transportation, etc.) subject to the approval of the City Planning Commission.**

**3. To prepare intermediate plans, assign priorities and budget for street transportation improvements, including off-street parking facilities, subject to the approval of the Board of Supervisors and the Mayor.**

**4. To have charge, superintendence and control over the design, construction, maintenance, cleaning and landscaping of all public ways, streets, sidewalks, pedestrian and vehicle tunnels, bridges and other street transportation facilities, including street lighting, surface drainage and other appurtenances now or hereafter to be constructed in the City of San Francisco, with the exception of certain park roads, and subject to existing and future agreements with federal and state agencies.**

**5. To promulgate rules and grant permits for the placing of utility conduits, poles, railroad tracks, vaults and all other temporary or permanent structures or obstructions on, above, or below street areas.**

**6. To direct and control the use of the street system by vehicular and pedestrian traffic through installation and maintenance of traffic and parking control devices, signs, signals and markings, in conformance with California Motor Vehicle Laws.**

**7. To promulgate rules and grant permits for the use of the street system by large or peculiar vehicles, for parades or public assemblages and for the closing of streets for construction or other purposes.**

**8. To investigate and approve permits for the operation of public parking stations and garages in cooperation with the Fire Department.**

**9. To promulgate rules and grant permits for use of the street system by vehicles engaged in public transportation, including taxicabs, limousines, for-hire vehicles and common carriers, subject to California State Law.**

**10. To periodically review the operation of the Municipal Railway and any other publicly-owned transportation system hereafter operated within the City of San Francisco as it relates to other segments of the transportation complex and report thereon to the Public Utilities Commission and Board of Supervisors.**

## ORGANIZATION OF THE DEPARTMENT

The Department would be organized by Bureaus and Divisions as shown in the organization chart opposite. In the remainder of this chapter, the functions and responsibilities of each Bureau are described, together with personnel requirements of the Department, and its effect upon and relations with other agencies of government.

**The development of sound plans for off-street parking facilities, for freeways and streets depends on knowledge of traffic volumes and other data which must be collected regularly.**

## Transportation Planning Bureau

The Transportation Planning Bureau would do research, data collection, planning and programming. This Bureau would formulate the master street transportation plan and translate it into a continuous program for street transportation improvements. *Planning for off-street parking, major streets and freeways, street lighting, traffic control systems and public transportation would be centralized in this Bureau.*

Such planning demands a continuing data collection and analysis system. The Bureau should have sufficient manpower to carry out the research and periodic field studies required, and to analyze all data obtained. In addition to information obtained by its own staff, the Bureau will call upon the operating bureaus to supply information (such as accident rates or pavement life) obtainable as part of their normal operations.

*This Bureau would supervise the Department's inventory and major record keeping, as it relates to the physical extent and condition of the street system and appurtenances.* As in the research program, operating bureaus of the Department would assemble the data under the supervision of the Transportation Planning Bureau, with field assistance when required.

The Bureau would prepare the Department's annual capital improvement budget and the intermediate and master plans. These plans require Planning Commission approval; the Bureau should prepare them in close cooperation with the Planning Commission staff.

In off-street parking matters, the Transportation Planning Bureau would handle functions now performed by the Parking Authority in determining parking deficiencies, developing a parking plan and recommending the specific sites. The Board of Supervisors would continue to exercise the powers of a parking authority under the Parking Law of 1949. The Planning Commission would continue to review parking proposals before submission to the Board of Supervisors.

The Transportation Planning Bureau would be performing two of the seven functions previously described—"planning" and "inventory and records." To carry these out effectively it is recommended that the Bureau be headed by an Assistant Director, who would be expected to represent the Director at conferences concerning transportation planning, and act as his chief source of information on all aspects of the future program of the Department.

## Street Construction Bureau

This Bureau would carry out two functions of street and traffic management—"design" and "construction." The Design Division would be responsible for land surveying, street and freeway design and structural design. In its surveying and mapping operations it would serve the Transportation Planning Bureau, as well as other bureaus and departments of the city government. *The design work of the Bureau would include the establishment of standards and design criteria for street construction and the checking and approval of design work performed for the Department by outside agencies.* The Division would perform design work for streets, structures, off-street parking facilities and other con-

struction projects within the jurisdiction of the Department. The Director should, however, be fully authorized to contract with consulting firms for design work when this is necessary.

The Construction Division would inspect and approve all street and traffic construction projects, including the inspection of construction projects (such as driveways or utility projects) authorized by permits issued by the Street Operations Bureau. The Division would confirm that all of the requirements of the design or permit specifications are met and that the placement and type of materials are satisfactory. For this latter purpose, the Division should include or have access to a material testing laboratory.

Work done under street assessment procedures would be administered by this Division, including the recommendation of the assessment distribution. Private construction projects for street facilities which the city does not enter as designer or constructing agency, would be inspected by this Division, after approval of the plans by the Design Division.

## Street Operations Bureau

This Bureau would carry out the "operations" function of street and traffic management, and "design" and "maintenance" functions related to traffic control devices and street lighting.

*The Bureau's Street Use Division would issue all permits for special street uses (construction openings, driveways, sidewalk structures, parades, etc.)*

It would establish detour routes and promulgate regulations covering warning devices for street obstructions. The Division would handle truck routings and over-dimensional trucks and serve as liaison agency with trucking agencies in solving mutual operational problems.

*The Traffic Control Division would conduct traffic studies and promulgate regulations for vehicle and pedestrian use of the street.* The Division would design and order the installation of traffic control devices, signs and markings, including traffic signals, street lighting, parking control signs or meters, pedestrian crosswalks and barriers, etc.

*The Operations Shop Division would service traffic control devices and street lighting or, where these functions are performed by contractors, supervise and direct the maintenance thereof.*

The recommended centralization of the design and maintenance of traffic control devices in the Operations Bureau varies somewhat from previously described principles. It has been found in other cities, however, that the design and operation of traffic control systems are so closely related, and

**Special street uses, such as the storage of construction materials, must be controlled.**

maintenance, which includes installation of signs and markings, requires such close supervision by the operations agency, that the recommended organization is superior. This arrangement does not, however, imply a complete separation of these crews from street maintenance crews. All crews should operate from a common maintenance yard and be able to exchange specialized manpower and equipment by simple intra-departmental procedures. Usually, however, the distinctiveness of their separate activities would make such exchanges unnecessary.

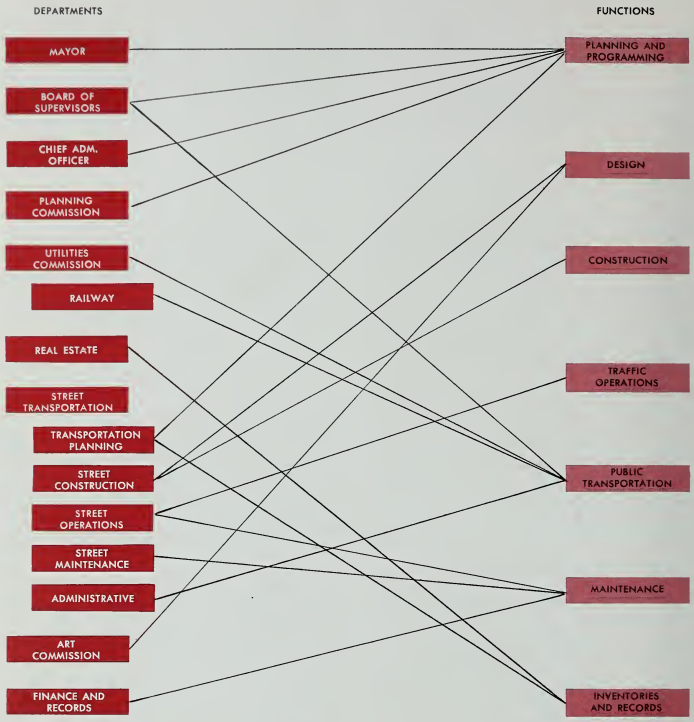
## Street Maintenance Bureau

The Street Maintenance Bureau would be responsible for maintenance of the street system. This would include street cleaning, landscaping, street repair and structural maintenance and operation. In addition, this Bureau would have the inspectional responsibilities inherent in maintenance. *These would include the inspection of sidewalks and streets for hazardous structural defects and programming of maintenance work to correct defects and keep the street system in adequate repair.* Major maintenance or reconstruction projects beyond the scope of municipal forces would be programmed by this section but given to the Street Construction Bureau for plans, specifications and contract supervision.

In addition to the labor crews involved in the actual maintenance activity, the Bureau would require a small staff of inspectors and maintenance analysts to adequately discharge its responsibilities.

(The three Bureaus just described would constitute the Engineering Section. Each would be headed by an Engineer. The three bureau heads would report to the Deputy Director and Chief Engineer.)

# CONSOLIDATION OF STREET TRANSPORTATION FUNCTIONS IN SAN FRANCISCO*




*As reorganized

## Administrative Bureau

The fifth bureau of the Department — the Administrative Bureau — would conduct the general office work, keep accounts and cost records, arrange purchasing and carry on the other business functions of the Department. The Bureau would have two other important functions: Public Transportation and Public Information.

*The Public Transportation Division would license and franchise public transportation enterprises and promulgate rules for the effective regulation of these media.* The transportation engineer in charge of this Division also would act as liaison agent with the Municipal Railway to maintain full cooperation.

*The Public Information Office would serve as the central agency for receiving complaints, requests and suggestions from the general public and obtaining prompt action on these matters.* It would also disseminate to the public, information on the policies and activities of the Department to promote fuller understanding of this important municipal operation. The necessity for such an office has been recognized in only a few of the city's departments, principally the utilities. Much of the controversy and public misunderstanding surrounding the city's street and traffic program could be avoided by properly conducted informational activity. Street and traffic management so vitally affects the lives of the citizenry as to necessitate assignment of these responsibilities to a centralized office.

The Administrative Bureau should be headed by an Assistant Director.

## EFFECT ON OTHER DEPARTMENTS

The effect of the proposed reorganization on municipal agencies now sharing responsibilities for street transportation would be as follows:

## Mayor

The Mayor, as chief executive officer of the city, would continue to supervise the administration of street transportation affairs. With elimination of the variety of commissions and authorities having a voice in street management, the Mayor could more effectively guide over-all activities in this area.

## Board of Supervisors

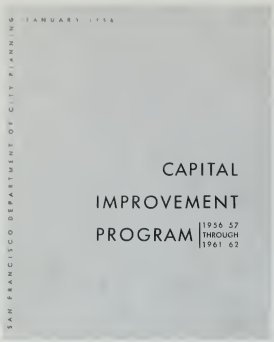
The reorganization will strengthen the position of the Board of Supervisors as the legislative, policy-forming body of the city-county government. *A number of administrative functions now performed by the Board should be delegated to the new Department and so free the Board of these time-consuming minutiae.*

**The Board of Supervisors would relinquish detailed traffic control responsibilities.**

The Board of Supervisors would continue to act as a Parking Authority in ordering, by resolution, the procurement of sites or leasing of property for off-street parking facilities. The Department of Street Transportation would make needed studies, prepare proposals and recommend action to the Board.

The Board of Supervisors would relinquish to the new Department original authority over the establishment of all traffic and parking controls on city streets, including stop signs, signals, parking zones, time limits and meters, one-way streets, restricted streets and turning prohibitions. This merely formalizes past practice of the Board in divesting itself of these administrative functions. The Board would, in delegating this authority, adopt by ordinance or resolution, the rules and regulations governing the Department in carrying out this function. Through a Board of Supervisors' Committee, it would continue as final arbitrator in these matters. For special speed zones, action of the Director of Street Transportation must be ratified by the Board of Supervisors to comply with state law.

The Board of Supervisors would continue to accept the dedication of roadways, instigate condemnation of property for street purposes and authorize purchase of property. *The Department of Street Transportation would designate grade, roadway width and other right of way elements.* In ac-




**The City Planning Commission would keep jurisdiction over the city's development.**

cepting property for street purposes the Board would continue to give over-all supervision and control to these matters. The Department could, however, make such alterations in physical details as needed to meet engineering requirements without further Board action.

The Board of Supervisors would continue to establish by ordinance, procedures for letting street contracts, including amounts to be added as financing charges, and would adjudicate appeals with respect to proposed work or assessments or order appropriate changes. The Director of the Department of Street Transportation should be required to notify the Board of Supervisors sufficiently in advance of any such work so that opportunity for appeal will not be foreclosed.

The Board of Supervisors would continue to regulate, by ordinance, issuance and revocation of licenses and permits for use of, obstruction of, or encroachment on public streets. The Department of Street Transportation would issue these permits and promulgate supplemental rules to carry out the Board's intent.

*It is recommended that the Streets and Highways Committee of the Board of Supervisors be retitled the "Committee on Street Transportation," and given exclusive jurisdiction over matters administered by the Department.* Besides present duties, this would include some matters now under jurisdiction of the Police and Public Utilities Committees.

## Chief Administrative Officer

The Chief Administrative Officer would be directly responsible for the administration of the Department of Street Transportation, as well as the nine other offices now under his supervision. His charter responsibility to coordinate traffic control activities would be simplified, since all such activity would reside within his jurisdiction. The Chief Administrative Officer would continue to act as Road Commissioner, with the Director of Street Transportation as Deputy.

## Art Commission

The Art Commission has the responsibility of guarding the esthetics of the city's public construction. Its powers and duties would not be abridged. The Commission has fully cooperated with existing agencies of government to insure that no utility is sacrificed in the provision of pleasant and attractive transportation facilities. It is contemplated that in continuing this constructive attitude the Commission would greatly assist the proposed Department of Street Transportation in the achievement of a common goal.

## City Planning Commission

The Planning Commission would continue to coordinate all aspects of the city's physical development, including street transportation facilities. It would, however, be relieved of the responsibility for devising and maintaining the major street plan, off-street parking plan and transportation plan which would come under the Transportation Planning Bureau of the new Department. The major street plan and other long range plans would be submitted to the City Planning Commission for inclusion in the master plan of the city, and in their formulation, the staff of the Commission would be consulted.

The Planning Commission would continue to advise the Board of Supervisors on the annual and five-year capital improvement programs of the various departments, including the Department of Street Transportation. However, it would not have to review operational plans of the Department, such as one-way street or through-street proposals.

## Department of Electricity

All functions of the Department of Electricity dealing with erection, maintenance and repair of parking meters and traffic control signals (except as noted below) would be transferred to the Department of Street Transportation. This would necessitate transfer of approximately 40 employees.

Until the remaining Wiley-type traffic signals are replaced, it might be advisable to continue shop repair of these devices by the Department of Electricity, on a work requisition basis. These antiquated control devices should be replaced by modern, flexible traffic controls as soon as possible.

Relieved of these traffic duties, the Department of Electricity could profitably reorganize its activity to give more emphasis to the rapidly growing field of radio communication. The Department would continue to service the communication facilities in radio equipped vehicles of the Department of Street Transportation.

## Department of Finance and Records

The Tax Collector would supervise, as now, the collection of fees and issuance of permits by the Department. His staff would continue to collect and wind the city's parking meters. The latter arrangement, although somewhat unorthodox, has proved satisfactory for the city and no change appears justified now.

## Fire Commission

Permits for operation of public garages, and automobile parking stations would continue to be issued by the Fire Commission. However, issuance, renewal or revocation of such permits should be subject to approval of the Department of Street Transportation. Thus, both the fire prevention and street traffic aspects of such operations would be adequately considered. As soon as the new Department is formed, a set of rules and regulations governing issuance of such permits should be formulated and submitted to the Board of Supervisors for ratification. This area of city interest has been neglected in the past.

Permits for moving buildings and large loads and for street storage of materials, blasting and street excavations would be issued by the Department of Street Transportation, with notice to the Fire Chief. No such permit should be issued until regulations of the Fire Commission have been complied with. The Chief of the Division of Fire Prevention and Investigation would designate routes to be traveled by tank vehicles transporting flammable liquids, subject to approval of the Director of Street Transportation.

## Parking Authority

The Parking Authority created by resolutions 9126 and 9283 would be dissolved, and its major functions and staff transferred to the Department of Street Transportation. As previously indicated, the Board of Supervisors would continue to act as a Parking Authority under the California Parking Law of 1949, with the Department supplying technical services. The Parking Authority now has a staff of four.

The power of the present Authority to operate publicly-owned parking facilities has not been exercised; the operation has been assigned to the private agency undertaking financing and construction. Ultimately, these facilities will revert to the city, with the possibility of municipal operation. In the case of Union Square Garage, the structure will revert to the city in 1967.

Should leased operation not be practicable at that time, it is recommended that the Public Utilities Commission be empowered to perform this function under general supervision of the Department of Street Transportation.

## Police Commission

The Police Commission would be relieved of all engineering functions as recommended by that body in its letter of June 12, 1956, addressed to Mayor Christopher.

The Department of Street Transportation would install permanent traffic and parking control devices, signs and markings. The Police Department should, however, be empowered to divert traffic, temporarily prohibit traffic movements or parking, or take such other actions as may be necessary to handle traffic

**The Supervisors would continue to serve as a parking authority as state law provides.**

**Collection and analysis of accident data would remain under the Police Department**

in emergencies. Permits for parades and street assemblages would be issued by the Department of Street Transportation, subject to approval of the Chief of Police.

Franchises and permits for operation of vehicles-for-hire, taxis, limousines, and other public carriers, would be issued by the Department of Street Transportation. The Police Department would, however, retain the supervision, as to public morals and safety, of drivers of such vehicles.

*The Police Department would continue its work in a number of auxiliary traffic safety fields: collection and analysis of traffic accident information; training and supervision of school patrols; licensing of bicycles; and promotion of traffic safety.*

The engineering use of accident records is vital to proper traffic operations, yet duplication of record systems is unwarranted extravagance. To assure maximum joint use of the information, personnel of the Department of Street Transportation should be assigned to work with the Police Department record section and serve as liaison agent to maintain proper inter-departmental cooperation. The Department of Street Transportation should also have funds available for transfer to the Police Department in payment of special accident analysis procedures it may request.

Relinquishment of traffic engineering duties by the Police Department should free approximately 12 full-time officers and a varying number of men assigned part time. These men would add to the enforcement effectiveness of the Department. Three employees of the Department of Public Works now assigned to the Police Department would be reassignable to new duties.

## Department of Property

The Department of Property would continue to serve as right of way agent for the procurement of properties necessary for the improvement of the transportation system.

## Public Utilities Commission

All functions of the Public Utilities Commission relative to the design, construction or operation of the street lighting system would be transferred to the Department of Street Transportation. The Commission would, however, continue to furnish or contract for the required utility services, and would be reimbursed therefor by budget transfer from the Department of Street Transportation. Approximately five of the 15 members of the Bureau of Light, Heat and Power would be transferred to the new Department.

## Department of Public Works

All matters relating to the construction, operation and maintenance of streets would be transferred from Public Works to the Department of Street Transportation. The Director would have the same powers as related to street construction now held by the Director of Public Works. This, in addition to direct work, would include authority over any construction in the right of way, entering into contracts for street construction or maintenance, supervision of private construction and inspection of the condition of streets, sidewalks and street structures.

The divisions of Traffic Engineering, Streets and Highways, Street Repair and Street Cleaning would be transferred intact to the new Department. In addition, personnel from the divisions of Design, Construction, Administration and Building Repair now performing street and traffic duties would be transferred. Approximately 650 of the 1,556 employees of the Department would be affected.

## Recreation and Park Commission

The park roads, which in the past have been maintained by the Department of Public Works, should become the complete responsibility of the Department of Street Transportation for maintenance and operation. This can best be accomplished by agreement between the Recreation and Park Commission and the new Department's Director formalized by action of the Board of Supervisors. The authority should not, however, include widening or re-aligning roads, or any action which would affect park land not now used for road purposes. Any action involving added park land would be subject to the approval of the Recreation and Park Commission. All traffic control devices installed on park roads, irrespective of maintenance status of the roads, should conform to standards prescribed by the Department of Street Transportation.

## PERSONNEL REQUIREMENTS

Most of the staff for the Department of Street Transportation would be transferred from the various agencies now carrying out the functions to be consolidated, as indicated previously. Some new positions would be created where a function, such as transportation planning, has been neglected in the past. Other positions, however, would be reduced due to the elimination of duplications. Existing civil service rules would protect the holders of these positions. Reassignment of duties, plus normal attrition would rapidly eliminate any surplus. Most bureau heads would simply transfer in grade from their present department to the new Department. Some would advance in grade, consistent with increased responsibility. *Creation of this new Department should, after an adjustment period, reduce the total personal service cost of providing street and traffic management.* With the increased efficiency of management following reorganization, the expenditure would provide a much higher level of service.

The Department would require the following new positions:

### Director

The position of Director should be filled by appointment; the appointee to serve at the pleasure of the Chief Administrative Officer. This is essentially an administrative position requiring a sound background in municipal public works and urban transportation problems and procedures. At least 15 years of responsible experience in these fields should be required and selection made on the basis of education, experience, administrative ability and demonstrated leadership in the urban transportation field. To secure the most highly qualified applicants for this position, prior residence in San Francisco should not be required. Compensation for this position should be comparable to that of other major department heads: Public Works, Public Utilities, etc.

**Street lighting responsibilities would be transferred to the proposed new department.**

### Deputy Director and Chief Engineer

The Deputy Director and Chief Engineer should be appointed by the Director. He would serve as principal assistant to the Director in all departmental activities, and would have immediate supervision of the Engineering Section, including the Construction, Operations and Maintenance Bureaus.

The Deputy Director should be a registered engineer in the State of California at the time of his appointment. He should possess a thorough knowledge of municipal street construction, maintenance and operations procedures, with at least 10 years of responsible experience in these fields. He should be able to direct major engineering undertakings and effectively administer a large municipal organization. This position should be filled on the basis of education, experience and administrative ability. The City of San Francisco has several engineers now in its employ qualified to fill this position. Since they now hold responsible positions, however, it may be

**Personnel with specialized training will be required in many of the top jobs in the proposed department. Graduate engineers would be in charge of several of the recommended bureaus.**

necessary to fill this position from outside the municipal organization. In this case, it would be advisable to waive pre-residence requirements.

**All the positions described below would be subject to Civil Service requirements.**

## Assistant Director for Administration

The Administrative Assistant would be responsible for the Business Office, including accounts and budgets, contracts and purchasing, and the conduct of the general office. This is not primarily an engineering position, although engineers will administer some divisions. The Bureau head should be experienced in public administration and public works procedures and familiar with the accounting and personnel processes of the City of San Francisco. It would be desirable to fill this position by promotional examination among those having comparable duties in the municipal organization.

## Assistant Director for Planning

The Assistant Director for Planning should be a graduate engineer or city planner with considerable experience in conducting traffic and parking studies, economic analyses, public works planning and programming. A minimum of ten years of education and experience should be required. This position has no specific counterpart in the city's government today: it may be necessary to select someone without previous municipal employment in San Francisco. Experience with consulting firms specializing in transportation planning or state highway planning sections would be valuable background for this position.

## Engineer of Construction

This Bureau would be charged with the design and construction of street facilities and its head should be a graduate civil engineer with extensive experience in urban street construction. The duties embrace those of the present Assistant City Engineer. It would be expected that this officer would be transferred to head the Bureau.

## Engineer of Operations

This Bureau would be responsible for the operational aspects of street and traffic management. The Bureau head should be a graduate engineer especially qualified by training and experience in traffic engineering procedures. He should be selected from the two principal traffic engineers now in municipal service and advanced in rating commensurate with the added responsibility.

## General Superintendent of Maintenance

The General Superintendent of Maintenance would direct the activity of the street maintenance forces. This would require a knowledge of good maintenance practices and ability to organize and direct the work of skilled and semi-skilled laborers. The position should be filled by promotional examination among the various superintendents and engineers now in municipal service qualified by sufficient training and experience.

# Additional Proposals

RECOMMENDATIONS in the previous chapter were directly concerned with San Francisco's urgent need for more efficient street transportation management.

In the course of this study, however, suggestions were developed for additional related improvements. While these are outside the primary scope of this report, they are presented here because of the important benefits which their adoption would bring to the community.

## TRAFFIC SAFETY COMMITTEE

Traffic safety is vital to every city and every citizen. Billions of dollars and immeasurable human happiness are annually sacrificed in needless traffic accidents. A successful program for traffic safety includes engineering, enforcement, public education, driver training, traffic courts, and motor vehicle control. It requires cooperation of every industry, trade and civic group. Traffic safety is everyone's business. But to be fully effective, these independent interests must have some common focal point and guidance.

The city should provide this guidance. *More particularly, the city should see that its traffic safety program is fully coordinated.* A committee drawn from the municipal agencies most directly concerned in this field should be formed. The Department of Street Transportation, Municipal Court, Police Department, Board of Education, Municipal Railway, and possibly, the Civil Service Commission, should be represented.

This group would coordinate all traffic safety work and foster a well-rounded traffic safety program. The Mayor should fully support establishment and continuation of such an organization, including, as necessary, arrangements for staff and clerical services. This organization would expedite exchange of information and development of inter-agency cooperation. The group could also develop and carry out definite traffic safety programs, such as the widely acclaimed Mayor's Traffic Safety Conferences in Pittsburgh.

## FORCE ACCOUNT LIMITATION

The City Charter provides that any construction or maintenance activity exceeding $2000 in total cost be performed by contract rather than by municipal forces. In the reports received from the various departments as part of this study, it was apparent that this limitation produces numerous inefficiencies. City maintenance crews can't carry out projects which, if undertaken, could reduce costs.

It is a basic tenet common to most governmental operations that work should be performed by contract forces wherever economically justified. No theory of government, however, would suggest that the city deliberately penalize itself to adhere to the tenet when economic justification is lacking.

The 1932 charter included the $2,000 limitation. Subsequent inflation has increased the oppressiveness of this fixed limitation. Municipal ordinances permit departments to bid upon their own or other departments' proposals, but this practice has not been extensively followed.

This matter affects a number of agencies other than the Street Transportation Department. Thus, it is suggested that the Controller make a complete study, in conjunction with the affected departments, and report to the Board of Supervisors on the ramifications of this outmoded regulation.

## CENTRAL PERMIT BUREAU

Consolidation of street and traffic management functions will bring together many permit and licensing procedures now administered in separate departments, but not all permit activities of the city. Many private business operations require permits

and licenses from the city; often two or more permits for various phases of one project. It greatly inconveniences the public to be forced to go from one bureau to another to obtain these permits.

The Public Works Department has, in the past, established a Central Permit Bureau to receive the initial request for permits issued by that Department and route the application to appropriate bureaus. This has been a service to the public. Unfortunately, some of the value of the arrangement will be lost through the re-assignment of functions previously held by that Department. Also, that system was far from complete since many other departments issued, and will continue to issue, permits.

*To improve its service to the public, the city-county should study the possibility of establishing a single, centralized permits and licenses bureau patterned after the Public Works Permit Bureau.* This Bureau would receive all permit and license applications and route them to the appropriate agency or agencies. After necessary inspections and approval had been obtained, the Bureau would issue the permit and collect such fees as required. This should not infringe in any way upon the prerogatives of the various departments in approving, disapproving or adding conditions to any permit. It would merely streamline the permit application procedure.

Such a Bureau might logically be placed under the Tax Collector, since he is responsible now for the collection of all permit fees. It is recommended that a departmental committee, headed by the Tax Collector, be appointed to study and report upon this matter.

## REGIONAL PLANNING

The limitation of this report to the administrative structure within the City-County of San Francisco was inherent in the ordinance establishing the Street and Traffic Management Study. *But even the casual observer can see that transportation in the San Francisco Bay area today transcends municipal and county boundaries. Regional planning is essential.*

The California Division of Highways has over-all jurisdiction over the planning and construction of highway facilities for the region. At this writing, an inter-county committee is being formed to act upon regional rapid transit plans. But the problem facing the Bay area is not a highway problem, alone, nor a rapid transit problem: it is a transportation problem. No rapid transit plan will succeed which does not utilize to utmost advantage the freeway system of the area; no highway plan will succeed which does not integrate mass transit to drain off peak-hour loads. More attention must be given to the effect of proposed land use on the transportation network of the area as a whole.

This report does not offer a solution to the organizational problem involved. Certainly the first step is to develop area-wide transportation planning. Perhaps it is not too late to re-define the objective of the Bay Area Rapid Transit Commission. In any case, the problem is of major importance to the continued healthy growth of the area, and should get the immediate attention of top policy personnel of all governmental units involved.

**San Francisco is the transportation hub of the entire Bay area. Its program must be planned in cooperation with adjacent counties, the state, bridge authorities and federal government.**

# Steps to Take

THE major recommendation of this report is for establishment of a new department of city government: The Department of Street Transportation.

Adoption of this recommendation will require a vote of the people since several revisions in the City Charter are required. This, however, is only one step in the process necessary for establishment of the Department. Many additional steps can and should be taken before the next general election.

**STEP 1. Charter Amendments:** The City Attorney should draft the necessary charter amendments, guided by this report's Appendix (which was prepared in accordance with existing charter practices in San Francisco), and incorporating such alterations as the Board of Supervisors may order.

**STEP 2. Ordinance Revisions:** The City Attorney should prepare the revisions of city ordinances required to bring them into agreement with the City Charter as amended. This includes several new sections prescribing methods and procedures for the Director of Street Transportation in carrying out his duties. This report's Appendix and the companion document, "Legal Responsibilities for Street and Traffic Management in San Francisco," will be valuable tools in drafting these changes.

**STEP 3. State Statute Revisions:** If, in the opinion of the City Attorney, any changes in State Statutes would help the city augment or strengthen its own reorganization, appropriate steps should be taken to have these drafted and introduced during the present legislative session.

**STEP 4. Job Classifications:** The reorganization and re-assignment of functions and duties will require a careful re-assessment of civil service job classifications. The Civil Service Commission, in cooperation with the existing department heads and the Chief Administrative Officer, should complete the organizational structure presented in this report and prepare the necessary descriptions of the duties and minimum requirements of the various positions.

**STEP 5. Assignment of Personnel:** This report has not dealt specifically with the many re-assignments of personnel required to staff the new Department. In some cases, an entire division will be transferred intact to the new Department. This should cause no great problem. In other cases, however, several functions of an existing division are transferred and it will have to select the specific personnel to be transferred. A smooth transition requires that this transfer be carefully planned in advance by the affected supervisors acting under the guidance of the Civil Service Commission.

**STEP 6. Space Requirements:** The functions to be consolidated into the new Department are now being performed by a wide variety of agencies scattered both organizationally and physically throughout the city. Effective administration requires that the new Department have adequate office and shop space to physically consolidate its functions. This is not a demand for new space as much as a requirement for a re-assignment of space in existing municipal buildings to best accomplish this purpose. A survey of the space the various departments will require under reorganization should be made promptly as a basis for the necessary re-assignment. The Department of Public Works, under the guidance of the Chief Administrative Officer, should carry out this survey.

**STEP 7. Equipment Inventory:** At the time of reorganization, the Department of Street Transportation will fall heir to a tremendous variety of equipment, from pencil sharpeners to paving machines. Much of the paper work required to effectuate this transfer can be carried out in advance, based upon an inventory of existing equipment. Each division affected should prepare such an inventory to show the equipment to be retained and that to be transferred at the time of reorganization.

**STEP 8. Budget Preparation:** The listing of personnel to be assigned to the new Department will make possible preparation of its tentative per-

sonal service budget. The inventory of equipment and space requirements will indicate further budget inclusions. These figures should be gathered as the nucleus of the new Department's budget. This can best be done by the Chief Administrative Officer.

**STEP 9. Time Schedule:** Obviously, such a large-scale reorganization cannot be accomplished simultaneously without seriously disrupting the daily functioning of the municipal government. A great deal of careful planning and close cooperation among the various departments will be necessary during the transition which may take from six months to a year to accomplish. A schedule should be developed in advance as to the order of transfer of the various functions and personnel. This schedule will assist the department heads, supervisors and the persons to be transferred in adjusting their plans, budgets and work schedules.

# Appendix

SHOULD the recommendations of this study be accepted, the creation of a proposed new Department of Street Transportation will require charter amendments and revision of a number of codes and ordinances of the City of San Francisco.

For the guidance of the draftsman, suggested language for a charter section establishing the proposed new Department is set out in full below. The language follows closely the form and style used in the present city charter.

Present charter sections affected and the changes required are also indicated. In addition, listed are the sections of the codes and ordinances that will have to be amended to bring them into harmony with the powers and duties that will be vested in the proposed new Department.

## New Charter Section

### Department of Street Transportation

#### Director of Street Transportation

**Section ___. Subsection 1.** It is the declared policy of the City and County of San Francisco that the Department of Street Transportation hereinafter established shall constitute a centralized department with authority to plan, design, construct, maintain, operate and control the use of the city streets and highways. In carrying out these responsibilities the Department shall cooperate with other departments, commissions or bureaus of the city as may be provided for by this charter or by ordinances or resolutions adopted by the Board of Supervisors.

**Subsection 2.** There is hereby established a Department of Street Transportation consisting of five (5) Bureaus: Administration, Transportation Planning, Street Operations, Street Construction and Street Maintenance, and such other bureaus as may, from time to time, be deemed necessary by the Director, subject to approval by the Chief Administrative Officer and subject to other provisions of this charter.

**Subsection 3.** The Director of the Department shall be appointed by the Chief Administrative Officer and shall hold office at his pleasure.

The Director shall appoint an assistant who shall be his Deputy Director and Chief Engineer and shall hold office at his pleasure. The Deputy Director shall be an engineer registered under the laws of this state and shall become acting director when the Director is absent from the city or is physically indisposed.

**Subsection 4.** Subject to the requirements and regulations of the Civil Service Commission, the Director shall appoint two (2) Assistant Directors, one to be in charge of the Bureau of Administration and the other to be in charge of the Bureau of Transportation Planning, and an Engineer of Construction, an Engineer of Operations and a General Superintendent of Maintenance, who shall be in charge respectively of the three (3) remaining bureaus as hereinbefore provided. The Director shall also employ such other personnel as he may deem necessary to properly carry out the functions of his Department.

**Subsection 5.** The powers hereinafter assigned to the Department shall be exercised through the Director who may delegate and assign such powers and duties to the several bureaus of his department as he may deem necessary. He shall promulgate rules and regulations for the proper administration of his Department, and shall have such other powers and duties as now provided for in this charter.

**Subsection 6.** The powers and duties of the Department of Street Transportation shall be as follows:

**a.** To conduct traffic studies and research, and prepare and keep current a long-range street transportation plan, including, but not limited to, off-street parking, freeways, major streets and public transportation. This plan shall become part of the official master plan of the city upon review and adoption by the City Planning Commission.

**b.** To prepare detailed plans and budgets and assign priorities for street transportation improvements including, but not limited to, streets, tunnels, bridges and off-street parking facilities, subject to the budgetary and fiscal procedures provided for in this charter.

**c.** To have charge, superintendence and control over the design, construction, maintenance, cleaning and landscaping of all public ways, streets, sidewalks, pedestrian and vehicle tunnels, bridges and other street facilities including

street lighting, surface drainage and other appurtenances now or hereafter to be constructed in the City of San Francisco, except those park roads under the jurisdiction of the Recreation and Park Commission, subject to existing and future agreements with Federal and State agencies.

**d.** To prescribe rules and grant permits for the placing of utility conduits, poles, railroad tracks, vaults and any and all other structures or obstructions, either temporary or permanent, on, above or below the street grade, as provided for by ordinance.

**e.** To direct and control the use of the street system by vehicular and pedestrian traffic through the installation and maintenance of traffic and parking control devices, signals, signs and markings, subject to the provisions of the California Vehicle Code.

**f.** To prescribe rules and grant permits for the closing of streets for construction or other purposes and to grant permits for the use of the city streets by large or specially constructed vehicles, parades, processions or public assemblages, as provided for by ordinance.

**g.** To investigate the location of areas, lots or buildings proposed to be used as public parking stations or garages with particular emphasis to the ingress and egress therefrom and its effect upon traffic on the adjacent street, and to approve permits for such use. No permit for the erection, alteration, repair or use of any buildings, lots or areas intended for parking purposes shall be issued by any city agency unless approval has first been obtained from the Department.

**h.** To prescribe rules and grant permits for the use of the street system by vehicles engaged in public transportation, including, but not limited to, taxicabs, limousines, for-hire vehicles and common carriers as provided for by ordinance and subject to provisions of California State Laws.

**i.** To review, at least once a year, the operation of the Municipal Railway and any other publicly owned transportation system now or hereafter operating within the city for its effect on the city's traffic pattern and to report such findings to the Public Utilities Commission and Board of Supervisors.

**j.** To enter into contracts for the planning, designing, construction and maintenance of all facilities under the jurisdiction of the Department, as is now provided for by this charter.

**k.** To file and keep records of all orders issued by the Department relating to its control and supervision of the streets and traffic of the city. Such records shall be open to public inspection during reasonable business hours of the Department.

## Charter Amendments

1. **Section 61. Administrative Departments under Chief Administrative Officer.**
   Should be amended to establish the new Department of Street Transportation under the Chief Administrative Officer who shall appoint the Director. (See page 33 herein for comments.)

2. **Section 35. Bureau of Traffic Engineering and Administration: Director of Traffic: Chief of Inspectors, Police Department.**
   Should be amended to transfer the following powers and duties to the new Department of Street Transportation:
   1. Authority of the Police Commissioners over the location and use of traffic control devices.
   2. The powers and duties of the Bureau of Traffic Engineering and Administration relating to street traffic.

   In deleting the above references, it is suggested that a new paragraph be added which would specify the duties and responsibilities of the Police Department to direct traffic by means of police officers, to establish emergency traffic regulations, and to enforce the traffic ordinances of the city. (See pages 35, 39 herein for comments.)

3. **Section 35.4 (Under same title as section 35 above).**
   Should be amended by deleting reference to the assignment of an engineer by the Chief Administrative Officer to the Bureau of Traffic Engineering and Administration. Under the new proposal the Director of Street Transportation would be authorized to appoint his own personnel. (See page 40 herein for comments.)

4. **Section 42. Control and Use of Property — Tax Levy.**
   Should be amended by adding new matter to authorize the Board of Supervisors to designate and transfer, from time to time, certain roads and avenues traversing park property (now under the jurisdiction of the Recreation and Park Commission) to the control and jurisdiction of the Department of Street Transportation. (See page 41 herein for comments.)

5. **Section 88. Purchase and Sale of Material, Supplies and Equipment.**
   Reference to the authority of the Department of Electricity to manufacture and repair traffic signals should be deleted since this authority would be vested in the Department of Street Transportation. (See pages 35, 38 herein for comments.)

6. **Section 106. Director of Public Works.**
   Should be amended by adding "and Department of Street Transportation," in the third paragraph after the words "exclusive of those to be made by the Public Utilities Commission." (See page 33 herein for comments.)

7. **Section 107. General Law and Ordinance Procedure for Public Works.**
Should be amended by creating a new section to transfer the rights and powers relating to the construction and improvement of streets and highways from the Director of Public Works to the Director of Street Transportation. The Director of Street Transportation would be subject to the same procedure as now provided for by the general laws of the state or by the charter and ordinances of the city.

That portion of Section 107 providing for the construction and improvement of sewers and other public works now under the jurisdiction of the Director of Public Works should be consolidated and retained. (See pages 34, 40 herein for comments.)

8. **Section 108. Repair of Accepted Streets.**
Should be amended by substituting the Department of Street Transportation for the Department of Public Works, and substituting the Director of Street Transportation for the City Engineer. (See page 40 herein for comments.)

9. **Section 110. Financing Special Assessment Projects.**
Should be amended by adding "or the Director of Street Transportation" following reference to the Director of Public Works. (See page 33 herein for comments.)

10. **Section 112. Sewer, Water and Other Connections.**
Should be amended by creating a new section authorizing the Director of Street Transportation to order the laying of water, gas and other mains and connections, whenever, in contemplation of street improvements, he deems it necessary.

The remaining portion of Section 112 relating to the authority of the Director of Public Works over the laying of sewers and excavations on private property should be consolidated and retained. (See page 40 herein for comments.)

11. **Section 113. Liability for Damages by Reason of Defective Sidewalks, etc.**
Should be amended by substituting the Director of Street Transportation for the Director of Public Works. (See page 35 herein for comments.)

12. **Section 114. Spur Tracks.**
Should be repealed. A new section should be enacted to give the Department of Street Transportation authority to issue all spur track permits in the manner provided by ordinance by the Board of Supervisors. (See page 35 herein for comments.)

13. **Section 116. Director of Planning.**
Should be amended to provide that the Department of Street Transportation shall devise, establish and maintain the Master Plan as it relates to street transportation, subject to approval and adoption by the City Planning Commission. (See page 38 herein for comments.)

## Code and Ordinance Amendments

The above revisions in the Charter would require corresponding changes in the following codes and ordinances:

*Electrical Code* (Part II, Ch. III, Mun. Code, August 13, 1951).

Article 10.
Article 11.

*Fire Code* (Part II, Ch. IV, Mun. Code, January 19, 1953).

Sections: 307, 310, 405, 431, 434.

*Municipal Code* (Part III, July 15, 1949).

Sections: 1, 2, 24, 30, 118, 128.

*Police Code* (Part II, Ch. VIII, Mun. Code, February 27, 1955).

Sections: 64, 366-368, 690, 695, 1075-1081, 1087, 1098 (f), 1110, 1117-1120.

*Public Utilities Code* (Part II, Ch. IX, Mun. Code).

Sections: 202-204.

*Public Works Code* (Part II, Ch. X, Mun. Code, December 2, 1950, as amended by Ord. No. 9046, March 23, 1955).

Sections: 1, 2 (g, j, k, m, n, o, p, q), 107, 108, 156, 162, 185-188, 190-192, 194-198, 200, 201, 205, 206, 214-217, 219-222, 225-229, 231, 232, 238-240, 335, 338, 339, 343, 351, 358, 359, 361, 362, 400, 401, 405-407, 409, 411, 413, 422, 423, 555-570, 595, 609, 635-644, 671, 672, 675, 703, 706.8, 710, 715, 716, 752, 754, 776, 784, 794.
Ord. No. 2250.

*Traffic Code* (Part II, Ch. XI, Mun. Code, March 20, 1954).

Sections: 12, 14, 26, 28, 30, 32-35, 38, 39, 48, 52, 55, 102, 162, 163.
Ord. No. 4288 (February 19, 1947).
Sections: 2, 4-7, 15, 18.
Ord. No. 6095 (June 23, 1950).
Ord. No. 7248 (April 2, 1952).
Ord. No. 7745 (March 4, 1953).
Ord. No. 8119 (September 2, 1953).

*Miscellaneous*

Ord. No. 6986 (October 22, 1951).
Ord. No. 8993 (February 9, 1955).
Ord. No. 9072 (March 30, 1955).
Res. No. 9126 (October 6, 1949).
Res. No. 9283 (November 23, 1949).
Res. No. 15643 (June 15, 1955).
City Charter (1898), Sec. 9.

## PHOTO CREDITS

Page 8 San Francisco Parking Authority; San Francisco Police Department
10 Robert Lackenback from State Harbor Commission
11 California Division of Highways
13 San Francisco Department of Public Works
14 San Francisco Municipal Railway Bureau
15 San Francisco Department of Public Works
16 San Francisco Department of Public Works
17 U. S. Bureau of Public Roads
20 California Division of Highways
21 San Francisco Department of Public Works
22 Robert Rockwell from San Francisco Municipal Railway Bureau
23 San Francisco Department of Public Works
24 Larry Kenney from San Francisco Parking Authority
25 California State Automobile Association
26 San Francisco Department of Public Works
27 San Francisco Department of Public Works
28 San Francisco Department of Public Works
30 Atlanta Transit System, Inc., Atlanta, Georgia
34 San Francisco Department of Public Works
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